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ABSTRACT

This report assesses the results of the administration, during June of 1987, of the Grade 12 diploma examinations in the Province of Alberta, Canada. Most of the data is tabulated. The examination program consists of course-specific examinations that are based on the prescribed Program of Studies for Senior High Schools for the following courses: English, Social Studies, Mathematics, Biology, Chemistry, Physics, Language, and Literature; the Language and Literature course is available in French only. The report figures are based on all students for whom both a school-awarded mark and a diploma examination are available. This group comprises virtually all students completing the examination and includes students in public and private school. The report consists of general information about the diploma examinations program, followed by information specific to each subject. Letter grade distributions, averages, and standard deviations for school awarded, diploma examination, and final blended marks are provided. Diploma examination results are presented separately for written-response and multiple-choice items and selected reporting categories. Examination blueprints, which form the basis for reporting categories, are also included. (TJH)

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# Diploma Examination Provincial Report

## June 1987 Administration

ED 292844

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# Student Evaluation and Records

TM 811 223

Alberta
EDUCATION
September 1987

BEST COPY AVAILABLE

This report contains the statistical summary of the provincial results for the June 1987 administration of the Grade 12 diploma examinations in English 30, English 33, Social Studies 30, Mathematics 30, Biology 30, Chemistry 30, Physics 30, and Langue et Littérature 30.

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The Alberta Teachers' Association
The Conference of Alberta School Superintendents
The Universities Co-ordinating Council
The Public Colleges of Alberta
Alberta Education

The contribution of all of these groups is gratefully acknowledged.

Frank Horvath
Director
Student Evaluation and Records Branch

## SECTION 1: GRADE 12 DIPLOMA EXAMINATIONS PROGRAM

### Preface

Following each major administration of the diploma examinations, a report of provincial results is prepared. This document is the report for the June 1987 administration. Each school and school jurisdiction also receives a report of examination results for its students.

The *Provincial Report* consists of general information about the diploma examinations program, followed by information specific to each subject. Letter grade distributions, averages, and standard deviations for school awarded, diploma examination, and final blended marks are provided. In addition, diploma examination results are presented separately for written response, multiple choice, and selected reporting categories. Examination blueprints, which form the basis for reporting categories, are also included.

The reported figures are based on all students for whom both a school-awarded mark and a diploma examination mark are available. This group comprises virtually all students completing the examination, and includes students in public and private schools.

The *Provincial Report* is intended to supplement the diploma examination bulletins, school and school jurisdiction reports, content specifications for each subject, and the examinations themselves. Information from these documents should enable teachers, principals, superintendents, and others to make judgments with respect to the quality of student achievement at the provincial level and within schools and school systems.

Judgments about student performance should be applied to the task of improving educational programs. Educators in each jurisdiction are encouraged to study the examination results carefully to determine the strengths and weaknesses of their programs. Guidelines for interpreting school and school jurisdiction reports are included in this report. The Student Evaluation and Records Branch will assist educators in further analysis and interpretation on request.

### Introduction

The Grade 12 Diploma Examinations Program, which is an integral part of the high school diploma requirements, is intended to develop and maintain excellence in educational standards through certification of academic achievement. All Grade 12 students in Alberta are now required to write at least ONE diploma examination to receive a high school diploma. Also, mature students may receive credits for a Grade 12 course by writing the appropriate diploma examination without registering in the course.

The Diploma Examinations Program consists of course-specific examinations that are based on the prescribed *Program of Studies for Senior High Schools* for the following Grade 12 courses: English 30, English 33, Social Studies 30, Mathematics 30, Biology 30, Chemistry 30, Physics 30, and Langue et Littérature 30. Except for English 30, English 33, and Langue et Littérature 30, the diploma examinations are available in French translation on request. Langue et Littérature 30 is available in French only. The diploma examinations are administered three times per year: January, June, and August.

Alberta Education issues two distinct high school diplomas: the General High School Diploma and the Advanced High School Diploma.

## General High School Diploma

To earn a General High School Diploma, a student must obtain course credit in either English 30 or English 33 and obtain 100 credits distributed over courses as specified in the *Junior-Senior High School Handbook*. Some students who are working toward the general diploma may wish to obtain credits in other diploma examination courses (i.e. Social Studies 30, Mathematics 30, Biology 30, Chemistry 30, Physics 30, and Langue et Littérature 30). To obtain credits in these courses, one must also write the appropriate diploma examination regardless of the type of diploma one wishes to receive.

## Advanced High School Diploma

The Advanced High School Diploma represents achievement in an academic program that includes language arts (English), social studies, mathematics, and science. To earn an Advanced High School Diploma, a student must satisfy the current course and credit requirements for a General High School Diploma, and obtain course credits in English 30, Social Studies 30, Mathematics 30, and ONE of Biology 30, Chemistry 30, or Physics 30.

## Awarding of Course Credits

To obtain credit in any high school course, a student must earn a final mark of 50% or better. To obtain credit in a Grade 12 diploma examination course, a student must write the appropriate diploma examination and attain a final blended mark of 50% or better. The final blended mark is made up of 50% of the mark awarded by the school and 50% of the diploma examination mark. For example, a student taking Physics 30 might have a mark of 45% from the school and a mark of 57% on the diploma examination. This student would earn credit for Physics 30 because the final blended mark would be 51%, which is the average of the school and examination marks. For mature students who do not have a school mark or who have a school mark lower than the examination mark, the examination mark is the final mark.

## Award of Excellence

When candidates for an Advanced High School Diploma obtain a final average of 80% or higher on the four required diploma examination courses, with not less than 65% in any one of these four required courses, they receive an Award of Excellence. This Award of Excellence is noted on the student's Advanced High School Diploma.

When a student writes two or three of the diploma examinations in Biology 30, Chemistry 30, and Physics 30, the highest of these final course marks is used for diploma purposes and in the calculation of the average for the Award of Excellence.

## SECTION 2: GUIDELINES FOR INTERPRETING THE REPORTS ON THE DIPLOMA EXAMINATIONS

In addition to this *Provincial Report*, each school and school jurisdiction receives a report containing statistics based on students' results from that particular school or jurisdiction. The superintendent of a jurisdiction may request similar reports for instructional groups within schools in that jurisdiction. It is expected that instructional groups will be class groups; however, students may be assigned to groups in any way desired.

Jurisdiction, school, and instructional group reports contain tables that are parallel to the major tables in this *Provincial Report*. Reports are organized by examination subject. The following statistics are included:

1. letter grade distributions for school awarded, diploma examination, and final blended marks

2. averages and standard deviations for those marks

3. averages and standard deviations for multiple-choice questions, written-response questions, and the reporting categories used in this *Provincial Report*

4. the percentage of students selecting each alternative on each multiple-choice question

5. individual student results for examination marks, multiple-choice scores, written-response scores, and major reporting categories

All statistics are based only on those students for whom both an examination mark and a school mark are available. Original school awarded marks and examination marks are used; any changes due to appeals will not appear. In the event of differences between marks given in the reports and marks on results statements or transcripts, the marks on results statements and transcripts are the official marks.

The reports may be used as part of the information for:

1. evaluating the quality of instructional programs in each subject

2. comparing local student achievement with achievement of all students in the province

3. reviewing local student evaluation procedures

4. identifying individual student strengths and weaknesses

Those who are interpreting results must take into account the following limitations:

1. Group, school, or jurisdiction size will affect the importance of differences from the provincial results.

2. Averages on subscales or on different examinations can most fairly be compared if they are first converted to standard scores. To convert an average to a standard score, subtract the provincial average from the reporting group average and then divide by the standard deviation.

3. Blended mark distributions CANNOT be directly compared to school awarded mark distributions or diploma examination mark distributions. The blended marks are the average of the other two marks for each student. Since the school awarded marks and examination marks are not perfectly correlated, the blended marks will tend to be closer to the average, with fewer students receiving extremely high or low scores than in other mark distributions.

4. Factors affecting selection of examination courses vary from school to school. These selection factors must be considered when comparing marks for a school to provincial marks. Listed below are some factors that affect the interpretation of results.

    - Some schools may have a limited selection of courses; students who, in other schools, would have selected nonexamination courses will find it necessary to take diploma examination courses for credits. These schools should adjust their expectations downward relative to the provincial mean.
    - Some schools may have a policy of encouraging students to enroll in particular examination courses, resulting in a higher than usual proportion of students taking those courses. These schools should also adjust their expectations downward relative to the provincial mean.
    - Some schools may have a policy of discouraging students with weaker academic records from enrolling in particular examination courses, resulting in a lower than usual proportion of students taking those courses. These schools should adjust their expectations upward relative to the provincial mean.

5. School awarded marks and diploma examination marks are intended to be complementary. The role of the examination is to provide a common measure of achievement, so that individual students, schools, and jurisdictions will have a basis for comparing their achievement to the province as a whole. The role of school awarded marks is to reflect the important aspects of learning in a course that cannot be measured by a time-limited paper and pencil test. There can be acceptable reasons for differences of any size between an individual student's school awarded mark

and that student's diploma examination mark in a subject. Any comparisons of the two types of marks should be restricted to group statistics for groups of reasonable size, and should be made with full knowledge of the differences between the two measures.

The most effective way to use the reports for the improvement of educational programs is to identify areas of strength or weakness in the performance of local students. The following is a suggested model of a systematic approach which may be a useful starting point for those developing a system to identify strengths or weaknesses for their own school or jurisdiction. This model is based on work done by Medicine Hat School District #76.

Basic Tenets

1. It is desirable and feasible to ask teachers and school administrators to take responsibility for analysing and using provincial test results.

2. The development of analyses and action plans by each school is a more productive and positive activity than are interpretations made by an external source.

3. There is an identifiable group of factors which should be analysed and discussed when reviewing test results.

4. Subscale results are often more informative than total test scores.

5. Generalizations should be based on long-term data.

6. It is NOT necessarily desirable or productive to compare the results of different schools.

7. Diploma examinations measure the core of the program specified by the curriculum. However, specified skills and concepts that are not measured by the diploma examinations are also to be taught.

8. Written reports and face-to-face discussions between teachers and administrators are useful means of ensuring that results are appropriately interpreted and used.

Suggested Analysis and Reporting Format

1. Subject and date of test administration

2. Number of students who wrote the examination

3. Profile of students who wrote the examination

   a. noteworthy individual characteristics

   b. general or group characteristics

   c. previous performance

4. Retention rates (based on number of students enrolled during the preceding year in prerequisite subjects)

5. School performance compared to jurisdiction and provincial averages

6. Current school performance compared to previous years

7. Discussion of actual and expected subtest results, with recommended actions

8. Discussion of item results, identification of common errors, and suggestions of ways to reduce the misunderstanding that leads to the errors

9. Programming emphasis: hours of instruction, and skill and content emphasis

10. Instructional practices: methodology, curriculum fit, and resources

11. Program objectives not measured by the test

12. Recommendations for next year

13. Summary and concluding comments

14. Names and signatures of staff who prepared the report

Suggested Organizational Model

1. Teachers, department heads, and/or principals analyse and prepare a written report about each administration of a diploma examination.

2. Principals review and sign the report.

3. The report is shared with the jurisdiction central office.

4. The appropriate central office staff member prepares a written response to the report, with copies of the response going to the teacher, department head, principal, assistant superintendent, and superintendent.

5. If possible, all concerned staff meet to discuss the report and the response.

6. Reports are used to improve the program and maximize the opportunities for student success.

7. When large differences exist between actual and expected examination results, consideration could be given to performing a formal program evaluation.

8. The reports for the January and June administrations could include comparisons with data from the Grade 10, Grade 11, and Grade 12 years of the subject.

## SECTION 3: ENGLISH 30 DIPLOMA EXAMINATION

The English 30 Diploma Examination consists of two parts: Part A: Written Response and Part B: Reading (Multiple Choice), each worth 50% of the total examination mark.

Table 1 contains percentage distributions for school awarded marks, diploma examination marks, and final blended marks in English 30. Table 2 contains averages and standard deviations for the written-response questions and the multiple-choice questions. Averages given in Table 2 are based on raw scores, which are the number of marks obtained on each part of the examination.

The total marks possible are identified for the written-response and multiple-choice components.

Averages in both tables are based on the results achieved by 13 286 students. Differences between total averages and component averages are due to rounding.

Table 1

Provincial Percentages of A, B, C, and F Grades, Averages, and Standard Deviations of Scores
English 30

| Score (%) | School Awarded Mark | Diploma Examination Mark | Final Blended Mark |
|---|---|---|---|
| A (80-100) | 13.6 | 11.5 | 10.8 |
| B (65-79) | 39.5 | 34.8 | 38.4 |
| C (50-64) | 38.7 | 40.8 | 45.0 |
| F (0-49) | 8.2 | 13.0 | 5.8 |
| Average (%) | 65.0 | 63.6 | 64.8 |
| Standard Deviation | 12.1 | 12.6 | 11.2 |

Table 2

Multiple-Choice and Written-Response Raw Score Totals
English 30

| Examination Section | Total Marks | Weighting (%) | Average | Standard Deviation |
|---|---|---|---|---|
| Part A: Written Response | 50 | 50 | 31.5 | 6.6 |
| Part B: Multiple Choice | 78 | 50 | 50.0 | 12.0 |

Table 3

June 1987 English 30 Diploma Examination Blueprint
Part A: Written Response

| Description of the Writing Assignment | Reporting Category | Proportion of Total Mark (%) |
|---|---|---|
| Minor Assignments | | |
| The two writing assignments are connected to the reading of literary selections contained in the examination. In Assignment One, the students are required to respond to the selections in a personal context. In Assignment Two, the students are required to understand, analyse, and evaluate techniques used in literature and to synthesize their thoughts clearly and correctly in writing. | 1. Thought & Detail | 15 |
| | 2. Writing Skills | 5 |
| Major Assignment | | |
| The writing assignment sets a specific writing task but allows the student to choose a method of development and to select supporting details from personal experience with literature studied. The writing assignment is generated from literary selections and requires the students to understand literal and implied meanings, and to synthesize their thoughts clearly and correctly in writing. | 1. Total Impression | 5 |
| | 2. Thought & Detail | 10 |
| | 3. Organization | 5 |
| | 4. Matters of Choice | 5 |
| | 5. Matters of Convention | 5 |
| | | 50 % |

Table 4

Percentage Distribution of Scores on English 30: Part A
Minor Assignments (Personal Response and Critical Response)

| Score Scale Points | Personal Response Reporting Category | | Critical Response Reporting Category | |
|---|---|---|---|---|
| | Thought & Detail | Writing Skills | Thought & Detail | Writing Skills |
| 5 (Exceptional) | 4.5 | 4.6 | 4.4 | 4.1 |
| 4 (Proficient) | 31.8 | 36.3 | 26.6 | 31.7 |
| 3 (Satisfactory) | 54.1 | 51.6 | 43.7 | 52.8 |
| 2 (Limited) | 8.4 | 6.3 | 18.8 | 7.6 |
| 1 (Poor) | 0.6 | 0.6 | 3.5 | 0.8 |
| INS (Insufficient or No Response) | 0.6 | 0.6 | 3.0 | 3.0 |

Table 5

Percentage Distribution of Scores on English 30: Part A
Major Assignment

| Score Scale Points | Reporting Category | | | | |
|---|---|---|---|---|---|
| | Total Impression | Thought and Detail | Organi-zation | Matters of Choice | Matters of Convention |
| 5 (Exceptional) | 3.8 | 3.7 | 4.4 | 4.5 | 7.1 |
| 4 (Proficient) | 19.1 | 18.4 | 24.2 | 25.4 | 35.6 |
| 3 (Satisfactory) | 53.3 | 46.1 | 57.4 | 57.4 | 46.6 |
| 2 (Limited) | 22.1 | 29.3 | 12.7 | 11.4 | 9.2 |
| 1 (Poor) | 1.4 | 2.2 | 1.0 | 0.9 | 1.1 |
| INS (Insufficient or No Response) | 0.4 | 0.4 | 0.4 | 0.4 | 0.4 |

Table 6

June 1987 English 30 Diploma Examination Blueprint
Part B: Reading (Multiple Choice)

| Reporting Category | Questions by Cognitive Level: Literal Understanding | Inference and Application | Evaluation | Examination Emphasis |
|---|---|---|---|---|
| Meanings | 9,21,35,49, 56,57 | 2,13,14,16,27, 29,38,39,43, 44,50,52,53, 55,59,60*,64, 65,66,71 | 15,36*,40, 46,54,58, 62,69 | (21%) 34 items |
| Critical Response | 34,37 | 4,7,11,12,17, 18,19,22,23, 42,45,48,61, 63,67,68,70, 74,76 | 3,8,10, 20,41,51, 73,77 | (18%) 29 items |
| Human Experience and Values | | 1,6,24,26,28, 30,32,33,72 | 5,25,31, 47,75,78, 79,80 | (11%) 17 items |
| Examination Emphasis | 8 items (5%) | 48 items (30%) | 24 items (15%) | 80 items (50%) |

* Questions 36 and 60 were deleted from the examination. A review of the examination results and item statistics revealed flaws in these questions.

Table 7

Raw Score Results for English 30: Part B

| Reporting Category | Average | Standard Deviation |
|---|---|---|
| 1. Meanings (32 questions) | 19.1 | 5.6 |
| 2. Critical Response (29 questions) | 19.1 | 4.6 |
| 3. Human Experience and Values (17 questions) | 11.7 | 2.9 |

Multiple-Choice Questions

The percentage of students choosing each response for each multiple-choice question is given in Table 8. The correct response (key) for each question is also identified. Schools may use this information in conjunction with the test and with school results on individual items to determine local strengths and weaknesses.

Table 8

Results for Individual Multiple-Choice Questions
English 30

| Item | Key | Distribution of Responses (%) A | B | C | D | Item | Key | Distribution of Responses (%) A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | C | 3.1 | 8.8 | 83.5 | 4.6 | 41 | D | 32.2 | 16.9 | 5.7 | 45.2 |
| 2 | A | 63.6 | 12.6 | 11.5 | 12.2 | 42 | C | 10.2 | 2.5 | 72.3 | 15.0 |
| 3 | A | 31.7 | 23.7 | 6.2 | 38.4 | 43 | B | 9.5 | 69.4 | 12.2 | 8.9 |
| 4 | A | 64.3 | 10.8 | 12.1 | 12.8 | 44 | B | 7.9 | 75.1 | 11.6 | 5.4 |
| 5 | D | 0.9 | 1.9 | 3.1 | 94.1 | 45 | A | 57.7 | 3.9 | 19.7 | 18.8 |
| 6 | D | 4.4 | 33.3 | 8.7 | 53.6 | 46 | D | 15.7 | 5.8 | 13.7 | 64.7 |
| 7 | A | 79.4 | 15.7 | 2.8 | 2.2 | 47 | B | 11.8 | 73.1 | 5.7 | 9.4 |
| 8 | B | 1.4 | 85.6 | 9.3 | 3.7 | 48 | A | 82.1 | 7.0 | 5.6 | 5.2 |
| 9 | A | 40.6 | 8.2 | 27.6 | 23.6 | 49 | D | 8.5 | 4.0 | 16.9 | 70.6 |
| 10 | C | 10.3 | 3.4 | 65.6 | 20.6 | 50 | C | 5.1 | 10.6 | 59.6 | 24.7 |
| 11 | B | 39.2 | 48.1 | 6.8 | 5.9 | 51 | D | 9.5 | 18.7 | 10.4 | 61.4 |
| 12 | A | 76.0 | 12.0 | 8.1 | 3.9 | 52 | B | 10.9 | 40.3 | 11.1 | 37.7 |
| 13 | B | 1.4 | 79.5 | 10.2 | 8.9 | 53 | D | 8.2 | 7.9 | 18.2 | 65.6 |
| 14 | D | 24.0 | 8.7 | 15.1 | 52.2 | 54 | D | 1.6 | 41.5 | 4.9 | 52.0 |
| 15 | C | 16.7 | 4.3 | 65.6 | 13.4 | 55 | B | 16.3 | 40.5 | 26.4 | 16.7 |
| 16 | C | 48.3 | 3.2 | 45.6 | 2.9 | 56 | D | 9.8 | 11.7 | 27.2 | 51.1 |
| 17 | C | 5.7 | 3.5 | 75.4 | 15.3 | 57 | C | 6.3 | 14.0 | 71.7 | 7.9 |
| 18 | B | 4.9 | 61.2 | 7.9 | 26.0 | 58 | C | 3.7 | 10.5 | 78.9 | 6.8 |
| 19 | B | 3.8 | 69.3 | 24.3 | 2.6 | 59 | D | 22.5 | 18.4 | 27.4 | 31.7 |
| 20 | B | 13.2 | 63.6 | 17.5 | 5.6 | 60 | QUESTION DELETED | | | | |
| 21 | B | 13.1 | 56.3 | 5.8 | 24.8 | 61 | C | 3.2 | 7.0 | 81.9 | 7.8 |
| 22 | C | 2.8 | 6.3 | 77.8 | 13.1 | 62 | A | 53.2 | 10.5 | 10.5 | 25.6 |
| 23 | D | 36.0 | 11.4 | 10.2 | 42.3 | 63 | C | 14.2 | 1.8 | 81.5 | 2.4 |
| 24 | D | 7.6 | 5.7 | 5.5 | 81.1 | 64 | D | 3.6 | 19.2 | 9.9 | 67.2 |
| 25 | D | 7.2 | 36.3 | 13.8 | 42.7 | 65 | B | 2.1 | 54.7 | 29.5 | 13.6 |
| 26 | A | 66.8 | 3.1 | 15.5 | 14.5 | 66 | D | 22.6 | 12.8 | 13.1 | 51.4 |
| 27 | A | 64.5 | 11.4 | 9.1 | 15.0 | 67 | A | 72.2 | 10.2 | 12.8 | 4.6 |
| 28 | D | 7.4 | 1.5 | 1.3 | 89.8 | 68 | B | 21.3 | 61.4 | 9.4 | 7.7 |
| 29 | A | 41.8 | 5.9 | 28.2 | 24.1 | 69 | A | 57.9 | 14.7 | 5.4 | 21.9 |
| 30 | C | 5.2 | 12.7 | 79.7 | 2.4 | 70 | B | 8.0 | 59.8 | 27.9 | 4.1 |
| 31 | C | 8.0 | 9.8 | 74.7 | 7.4 | 71 | D | 3.1 | 9.4 | 10.8 | 76.5 |
| 32 | C | 9.9 | 9.3 | 71.5 | 9.3 | 72 | D | 15.1 | 6.6 | 27.2 | 50.9 |
| 33 | D | 8.2 | 1.3 | 2.4 | 88.0 | 73 | B | 5.7 | 67.8 | 23.2 | 3.0 |
| 34 | C | 11.0 | 6.9 | 80.2 | 1.9 | 74 | B | 7.3 | 64.3 | 11.1 | 17.0 |
| 35 | C | 4.0 | 20.2 | 62.5 | 13.2 | 75 | C | 12.0 | 6.6 | 54.6 | 26.5 |
| 36 | QUESTION DELETED | | | | | 76 | B | 15.4 | 60.9 | 12.2 | 11.1 |
| 37 | A | 65.8 | 11.1 | 10.8 | 12.3 | 77 | D | 6.1 | 17.1 | 23.7 | 52.8 |
| 38 | A | 91.3 | 3.7 | 2.0 | 2.9 | 78 | A | 50.8 | 18.2 | 17.2 | 13.4 |
| 39 | D | 2.3 | 7.7 | 19.4 | 70.6 | 79 | A | 55.0 | 15.6 | 8.4 | 20.6 |
| 40 | A | 43.6 | 13.0 | 9.2 | 34.2 | 80 | A | 63.7 | 10.1 | 7.9 | 17.8 |

*The sum of the percentages for each question may be less than 100% because the No Response category is not included. This category is not greater than 0.5% for any question.

## SECTION 4: ENGLISH 33 DIPLOMA EXAMINATION

The English 33 Diploma Examination consists of two parts: Part A: Written Response and Part B: Reading (Multiple Choice), each worth 50% of the total examination mark.

Table 9 contains percentage distributions for school awarded marks, diploma examination marks, and final blended marks in English 33. Table 10 contains averages and standard deviations for the written-response questions and the multiple-choice questions. Averages given in Table 10 are based on raw scores, which are the number of marks obtained on each part of the examination.

The total marks possible are identified for the written-response and multiple-choice components.

Averages in both tables are based on the results achieved by 5 572 students. Differences between total averages and component averages are due to rounding.

Table 9

Provincial Percentages of A, B, C, and F Grades, Averages, and Standard Deviations of Scores
English 33

| Score (%) | School Awarded Mark | Diploma Examination Mark | Final Blended Mark |
|---|---|---|---|
| A (80-100) | 4.3 | 6.5 | 3.3 |
| B (65-79) | 29.9 | 37.8 | 34.3 |
| C (50-64) | 53.1 | 41.9 | 55.7 |
| F (0-49) | 12.8 | 13.8 | 6.7 |
| Average (%) | 59.9 | 62.4 | 61.7 |
| Standard Deviation | 10.9 | 11.5 | 9.6 |

Table 10

Multiple-Choice and Written-Response Raw Score Totals
English 33

| Examination Section | Total Marks | Weighting (%) | Average | Standard Deviation |
|---|---|---|---|---|
| Part A: Written Response | 50 | 50 | 32.3 | 5.5 |
| Part B: Multiple Choice | 67 | 50 | 40.3 | 10.2 |

Table 11

June 1987 English 33 Diploma Examination Blueprint
Part A: Written Response

| Description of the Writing Assignment | Reporting Category | Proportion of Total Mark (%) |
|---|---|---|
| Personal Response to Literature<br><br>Students are required to read short literary selections that serve as a stimulus for a personal or reflective response. | 1. Thought & Detail | 10 |
| | 2. Organization | 5 |
| | 3. Matters of Choice | 5 |
| | 4. Matters of Convention | 5 |
| Functional Writing<br><br>Students are required to write for a specified purpose and audience. | 1. Thought & Detail | 10 |
| | 2. Organization | 2.5 |
| | 3. Writing Skills | 2.5 |
| Response to Visual Communication<br><br>Writing assignments are connected to a photograph. Students are required to write about main ideas, techniques of communication, and personal reactions. | 1. Thought & Detail | 5 |
| | 2. Writing Skills | 5 |
| | | 50% |

Table 12

Percentage Distribution of Scores on English 33: Part A
Section I: Personal Response to Literature

| Score Scale Points | Reporting Category | | | |
|---|---|---|---|---|
| | Thought & Detail | Organization | Matters of Choice | Matters of Convention |
| 5 (Proficient) | 3.4 | 4.0 | 4.3 | 8.1 |
| 4 (Capable) | 29.1 | 35.2 | 31.3 | 41.7 |
| 3 (Adequate) | 55.9 | 53.8 | 57.3 | 39.6 |
| 2 (Limited) | 10.6 | 6.4 | 6.5 | 9.5 |
| 1 (Poor) | 0.7 | 0.3 | 0.5 | 0.9 |
| INS (Insufficient or No Response) | 0.2 | 0.2 | 0.2 | 0.2 |

Table 13

Percentage Distribution of Scores on English 33: Part A
Section II: Functional Writing

| Score Scale Points | Reporting Category | | |
|---|---|---|---|
| | Thought & Detail | Matters of Choice | Matters of Convention |
| 5 (Proficient) | 1.2 | 2.0 | 4.0 |
| 4 (Capable) | 21.7 | 26.5 | 32.0 |
| 3 (Adequate) | 57.2 | 58.5 | 51.6 |
| 2 (Limited) | 18.9 | 12.3 | 11.3 |
| 1 (Poor) | 0.8 | 0.4 | 0.9 |
| INS (Insufficient or No Response) | 0.3 | 0.3 | 0.3 |

Table 14

Percentage Distribution of Scores on English 33: Part A
Section III: Response to Visual Communication

| Score Scale Points | (Assignment 1) Reporting Category | | (Assignment 2) Reporting Category | |
|---|---|---|---|---|
| | Thought & Detail | Writing Skills | Thought & Detail | Writing Skills |
| 5 (Proficient) | 1.9 | 4.2 | 1.3 | 3.9 |
| 4 (Capable) | 24.4 | 35.4 | 18.2 | 31.3 |
| 3 (Adequate) | 54.9 | 48.9 | 50.8 | 50.2 |
| 2 (Limited) | 16.1 | 9.9 | 21.5 | 9.9 |
| 1 (Poor) | 1.9 | 0.7 | 4.6 | 1.2 |
| INS (Insufficient or No Response) | 0.8 | 0.8 | 3.6 | 3.6 |

Table 15

June 1987 English 33 Diploma Examination Blueprint
Part B: Reading (Multiple Choice)

| Reporting Category | Questions by Cognitive Level: Literal Understanding | Inference and Application | Evaluation | Examination Emphasis |
|---|---|---|---|---|
| Meanings | 1,28,32,35 | 5,10,11,12,14, 17,18,20,22, 23,24,30,36, 38,39,40,42, 60,63,66,68 | 8,9,15, 34,41 | 30 items (22%) |
| Relationships of Form and Content | 58 | 2,21,29,37,43, 57,59,64,65, 69 | 6,27,62 | 14 items (10%) |
| Human Experience and Values | | 3,7,16,19,25, 33,61,67 | 4,13,26, 31,70 | 13 items (9%) |
| Life Skills | 48,50 | 44,45,46,49, 51*,52*,54,55, 56 | 47*,53 | 13 items (9%) |
| Examination Emphasis | 7 items (5%) | 48 items (34%) | 15 items (11%) | 70 items (50%) |

*Questions 47, 51, and 52 were deleted from the examination. A review of the examination results and item statistics revealed flaws in these questions.

Table 16

Raw Score Results for English 33: Part B

| Reporting Category | Average | Standard Deviation |
|---|---|---|
| 1. Meanings (30 questions) | 18.6 | 4.8 |
| 2. Relationships: Form and Content (14 questions) | 8.4 | 2.7 |
| 3. Human Experience and Values (13 questions) | 8.1 | 2.5 |
| 4. Life Skills (10 questions) | 5.3 | 2.0 |

Multiple-Choice Questions

The percentage of students choosing each response for each multiple-choice question is given in Table 17. The correct response (key) for each question is also identified. Schools may use this information in conjunction with the test and with school results on individual items to determine local strengths and weaknesses.

Table 17

Results for Individual Multiple-Choice Questions
English 33

| Item | Key | Distribution of Responses (%) A | B | C | D | Item | Key | Distribution of Responses (%) A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | D | 20.5 | 10.1 | 4.2 | 65.2 | 36 | A | 65.1 | 13.8 | 11.7 | 9.3 |
| 2 | C | 11.3 | 13.4 | 70.2 | 5.0 | 37 | C | 9.7 | 12.5 | 68.3 | 9.2 |
| 3 | D | 6.6 | 2.1 | 2.2 | 89.0 | 38 | D | 6.0 | 7.3 | 10.8 | 75.7 |
| 4 | A | 74.8 | 3.7 | 2.2 | 19.2 | 39 | D | 4.9 | 14.1 | 8.3 | 72.4 |
| 5 | B | 7.3 | 79.6 | 8.3 | 4.7 | 40 | D | 21.8 | 15.7 | 20.5 | 41.6 |
| 6 | D | 19.4 | 19.0 | 12.0 | 49.5 | 41 | A | 52.6 | 14.1 | 21.3 | 11.8 |
| 7 | D | 4.8 | 6.8 | 17.4 | 71.0 | 42 | D | 22.3 | 14.5 | 20.1 | 43.0 |
| 8 | C | 5.6 | 20.7 | 66.6 | 7.1 | 43 | D | 10.1 | 7.6 | 23.8 | 58.3 |
| 9 | B | 21.0 | 50.1 | 15.1 | 13.8 | 44 | C | 15.9 | 13.2 | 67.3 | 3.4 |
| 10 | B | 14.4 | 67.0 | 3.3 | 15.1 | 45 | B | 14.2 | 63.9 | 8.8 | 12.8 |
| 11 | C | 5.5 | 22.6 | 55.3 | 16.5 | 46 | B | 8.7 | 45.9 | 25.8 | 19.3 |
| 12 | A | 71.1 | 16.9 | 3.8 | 8.2 | 47 | QUESTION DELETED | | | | |
| 13 | B | 8.6 | 60.6 | 17.0 | 13.8 | 48 | C | 14.4 | 19.2 | 39.9 | 26.1 |
| 14 | A | 63.3 | 15.4 | 10.1 | 11.1 | 49 | B | 13.3 | 47.2 | 28.1 | 11.2 |
| 15 | A | 38.7 | 8.2 | 17.9 | 35.1 | 50 | C | 11.9 | 28.8 | 31.9 | 27.2 |
| 16 | C | 4.2 | 27.9 | 62.2 | 5.7 | 51 | QUESTION DELETED | | | | |
| 17 | A | 50.9 | 17.0 | 15.1 | 16.8 | 52 | QUESTION DELETED | | | | |
| 18 | A | 69.5 | 9.2 | 12.9 | 8.3 | 53 | D | 9.3 | 18.9 | 35.6 | 36.0 |
| 19 | A | 60.7 | 11.6 | 13.4 | 14.2 | 54 | B | 4.6 | 77.4 | 13.8 | 3.9 |
| 20 | B | 5.5 | 61.1 | 25.2 | 8.0 | 55 | C | 10.5 | 10.7 | 58.1 | 20.4 |
| 21 | A | 63.3 | 19.0 | 8.3 | 9.3 | 56 | B | 22.8 | 61.2 | 12.8 | 2.9 |
| 22 | C | 31.4 | 19.9 | 39.9 | 8.7 | 57 | A | 81.4 | 5.1 | 7.3 | 5.9 |
| 23 | A | 88.7 | 6.1 | 1.7 | 3.5 | 58 | B | 9.6 | 64.1 | 11.3 | 14.6 |
| 24 | D | 4.1 | 9.3 | 6.1 | 80.4 | 59 | B | 18.2 | 65.1 | 9.1 | 7.2 |
| 25 | A | 53.1 | 7.6 | 27.0 | 12.2 | 60 | D | 23.0 | 6.2 | 8.0 | 62.5 |
| 26 | C | 18.5 | 10.9 | 61.9 | 8.6 | 61 | D | 8.4 | 7.3 | 9.4 | 74.4 |
| 27 | B | 6.7 | 72.5 | 7.0 | 13.7 | 62 | D | 23.6 | 9.1 | 11.2 | 55.7 |
| 28 | A | 56.0 | 11.6 | 29.1 | 3.2 | 63 | A | 55.2 | 29.6 | 10.8 | 3.9 |
| 29 | C | 13.3 | 20.9 | 39.5 | 26.2 | 64 | B | 12.5 | 56.3 | 15.9 | 14.8 |
| 30 | A | 83.1 | 5.8 | 6.7 | 4.4 | 65 | A | 53.1 | 16.8 | 16.0 | 13.5 |
| 31 | B | 33.6 | 40.8 | 10.8 | 14.8 | 66 | B | 7.5 | 60.4 | 15.9 | 15.6 |
| 32 | C | 12.9 | 5.2 | 77.7 | 4.2 | 67 | D | 8.2 | 18.6 | 23.8 | 48.7 |
| 33 | A | 58.8 | 4.1 | 20.6 | 16.5 | 68 | D | 11.9 | 16.7 | 19.2 | 51.2 |
| 34 | C | 5.6 | 38.8 | 51.4 | 4.2 | 69 | C | 11.6 | 13.5 | 43.2 | 30.7 |
| 35 | B | 2.5 | 65.3 | 23.2 | 8.9 | 70 | C | 8.6 | 12.0 | 50.2 | 28.1 |

*The sum of the percentages for each question may be less than 100% because the No Response category is not included. This category is not greater than 1.0% for any question.

## SECTION 5: SOCIAL STUDIES 30 DIPLOMA EXAMINATION

The Social Studies 30 Diploma Examination consists of both multiple-choice questions (worth 70% of the total examination mark) and a written-response question (worth 30% of the total examination mark).

Table 18 contains percentage distributions for school awarded marks, diploma examination marks, and final blended marks in Social Studies 30. Table 19 contains averages and standard deviations for the written-response questions and the multiple-choice questions. Averages are based on raw scores, which are the number of marks obtained on each part of the examination. The total marks possible are identified for the written-response and multiple-choice components.

Averages are based on the results achieved by 11 696 students. Differences between total averages and component averages are due to rounding.

Table 18

Provincial Percentages of A, B, C, and F Grades, Averages, and Standard Deviations of Scores
Social Studies 30

| Score (%) | School Awarded Mark | Diploma Examination Mark | Final Blended Mark |
|---|---|---|---|
| A (80-100) | 17.5 | 14.5 | 14.6 |
| B (65-79) | 36.4 | 33.3 | 35.9 |
| C (50-64) | 38.6 | 33.0 | 40.6 |
| F (0-49) | 7.4 | 19.2 | 8.8 |
| Average (%) | 66.0 | 63.2 | 64.9 |
| Standard Deviation | 12.4 | 14.7 | 12.7 |

Table 19

Multiple-Choice and Written-Response Raw Score Totals
Social Studies 30

| Examination Section | Total Marks | Weighting (%) | Average | Standard Deviation |
|---|---|---|---|---|
| Written Response | 30 | 30 | 16.8 | 4.8 |
| Multiple Choice | 70 | 70 | 46.3 | 11.5 |

Table 20

June 1987 Social Studies 30 Diploma Examination Blueprint
Part A: Multiple Choice

| Content Category | Questions by Process Category | | | | | Examination Emphasis |
|---|---|---|---|---|---|---|
| | Recall & Comp. | Inquiry Skills A[1] | Inquiry Skills B[2] | Inquiry Skills C[3] | Valuing Skills | |
| Value Concepts<br><br>competing values<br>value positions<br>- Topic A<br>- Topic B | <br><br><br><br>20,28<br>57,62 | | | | <br><br><br><br>10,33<br>59,64 | 8% |
| Political and Economic Systems<br><br>facts, concepts, generalizations | 1,2,3,4,5, 6,12,14,17, 26,29,30,31 32,34,35 | 13,18,19 | 7,8,9,11 15,16,22, 25,27 | 21,23,24 | | 31% |
| Co-operation & Conflict Among States<br><br>facts, concepts, generalizations | 36,37,38,40, 48,50,51,53, 54,55,56,60 61,63,69,70 | 39,41,42 | 43,44,46, 49,52,58, 65,67,68 | 45,47,66 | | 31% |
| Examination Emphasis | 36% | 6% | 18% | 6% | 4% | 70% |

[1]Inquiry Skills A -- Identify and focus on the issue and formulate research questions.

[2]Inquiry Skills B -- Gather, organize, analyse, evaluate, and synthesize data.

[3]Inquiry Skills C -- Resolve the issue, apply the decision, and evaluate the decision, process, and action.

Table 21

Raw Score Results for Social Studies 30: Part A

| Reporting Category | Average | Standard Deviation |
|---|---|---|
| 1. Recall & Comprehension (32 questions)* | 20.7 | 5.6 |
| 2. Inquiry Skills: Identify Issue (6 questions) | 3.7 | 1.3 |
| 3. Inquiry Skills: Gather & Use Data (18 questions) | 12.2 | 3.4 |
| 4. Inquiry Skills: Resolve & Decide (6 questions) | 4.3 | 1.4 |
| 5. Valuing (8 questions) | 5.4 | 1.8 |
| 6. Political & Economic Systems (35 questions) | 23.3 | 6.1 |
| 7. Co-operation & Conflict (35 questions) | 23.0 | 6.0 |

* Recall and Comprehension questions in the Value Concept category in Table 21 are included in Reporting Category 5 (Valuing).

Multiple-Choice Questions

The percentage of students choosing each response for each multiple-choice question is given in Table 22. The correct response (key) for each question is also identified. Schools may use this information in conjunction with the test and with school results on individual items to determine local strengths and weaknesses.

Table 22

Results for Individual Multiple-Choice Questions
Social Studies 30

| Item | Key | Distribution of Responses (%) A | B | C | D | Item | Key | Distribution of Responses (%) A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | B | 5.5 | 79.5 | 10.7 | 4.2 | 36 | C | 3.4 | 3.4 | 79.3 | 13.8 |
| 2 | D | 12.3 | 6.9 | 22.4 | 58.3 | 37 | C | 16.0 | 19.6 | 58.6 | 5.7 |
| 3 | C | 44.8 | 7.0 | 46.2 | 2.0 | 38 | D | 16.7 | 5.6 | 8.4 | 69.2 |
| 4 | A | 76.5 | 5.5 | 9.7 | 8.2 | 39 | B | 39.6 | 40.6 | 12.5 | 7.2 |
| 5 | D | 21.0 | 2.2 | 4.0 | 72.8 | 40 | B | 3.6 | 79.1 | 12.1 | 5.2 |
| 6 | A | 68.5 | 11.9 | 13.3 | 6.2 | 41 | D | 19.3 | 23.0 | 11.9 | 45.7 |
| 7 | D | 5.2 | 6.2 | 35.8 | 52.8 | 42 | B | 3.1 | 85.0 | 5.1 | 6.8 |
| 8 | A | 50.3 | 18.0 | 27.1 | 4.6 | 43 | C | 4.8 | 6.1 | 52.4 | 36.7 |
| 9 | D | 8.2 | 19.1 | 4.4 | 68.1 | 44 | D | 14.5 | 18.4 | 8.4 | 58.6 |
| 10 | C | 7.4 | 14.2 | 69.4 | 8.9 | 45 | A | 82.7 | 6.4 | 7.7 | 3.2 |
| 11 | D | 2.3 | 4.5 | 4.5 | 88.7 | 46 | A | 60.7 | 19.6 | 10.4 | 9.2 |
| 12 | C | 15.1 | 26.3 | 50.1 | 8.5 | 47 | D | 9.9 | 15.5 | 6.6 | 68.0 |
| 13 | D | 26.9 | 19.1 | 13.4 | 40.5 | 48 | B | 19.3 | 43.5 | 25.0 | 12.0 |
| 14 | A | 39.9 | 23.6 | 17.8 | 18.6 | 49 | C | 12.2 | 10.6 | 65.5 | 11.6 |
| 15 | B | 22.9 | 58.6 | 14.6 | 3.8 | 50 | B | 3.3 | 60.0 | 11.4 | 25.2 |
| 16 | D | 27.8 | 13.5 | 7.3 | 51.2 | 51 | A | 78.8 | 5.0 | 6.5 | 9.7 |
| 17 | C | 20.5 | 7.2 | 58.3 | 13.9 | 52 | A | 75.1 | 4.2 | 13.0 | 7.8 |
| 18 | B | 11.0 | 76.5 | 10.8 | 1.6 | 53 | D | 6.0 | 8.3 | 10.2 | 75.5 |
| 19 | C | 6.6 | 2.0 | 79.4 | 11.9 | 54 | C | 12.4 | 18.0 | 63.0 | 6.6 |
| 20 | C | 3.4 | 8.6 | 76.0 | 11.8 | 55 | C | 24.9 | 16.9 | 39.6 | 18.5 |
| 21 | B | 6.4 | 73.3 | 8.7 | 11.6 | 56 | A | 41.5 | 17.8 | 30.5 | 10.1 |
| 22 | C | 2.1 | 5.3 | 86.0 | 6.5 | 57 | A | 47.1 | 13.5 | 18.5 | 20.8 |
| 23 | A | 68.7 | 19.8 | 4.1 | 7.3 | 58 | D | 19.6 | 12.5 | 4.5 | 63.4 |
| 24 | B | 9.4 | 73.0 | 8.5 | 9.1 | 59 | C | 6.5 | 9.8 | 63.2 | 20.4 |
| 25 | B | 3.8 | 74.8 | 17.9 | 3.4 | 60 | C | 4.1 | 25.1 | 64.2 | 6.5 |
| 26 | C | 18.5 | 11.2 | 38.8 | 31.4 | 61 | D | 6.6 | 5.3 | 7.7 | 80.4 |
| 27 | D | 4.3 | 7.5 | 7.3 | 80.9 | 62 | B | 12.3 | 65.7 | 10.4 | 11.5 |
| 28 | B | 4.8 | 66.5 | 18.6 | 10.0 | 63 | B | 15.2 | 73.7 | 6.2 | 4.9 |
| 29 | D | 12.0 | 12.0 | 15.8 | 60.1 | 64 | A | 91.9 | 3.5 | 0.5 | 4.1 |
| 30 | B | 9.2 | 83.3 | 5.2 | 2.2 | 65 | D | 5.3 | 2.2 | 20.0 | 72.4 |
| 31 | C | 18.3 | 6.1 | 71.9 | 3.7 | 66 | B | 6.7 | 62.7 | 8.9 | 21.6 |
| 32 | B | 6.9 | 77.8 | 8.1 | 7.1 | 67 | C | 7.2 | 2.3 | 86.9 | 3.5 |
| 33 | A | 61.0 | 7.4 | 6.0 | 25.6 | 68 | B | 13.6 | 73.6 | 5.2 | 7.4 |
| 34 | A | 75.6 | 17.4 | 4.5 | 2.4 | 69 | C | 17.8 | 21.1 | 51.7 | 9.2 |
| 35 | C | 3.1 | 9.9 | 77.4 | 9.6 | 70 | D | 9.1 | 3.9 | 14.3 | 72.6 |

*The sum of the percentages for each question may be less than 100% because the No Response category is not included. This category is not greater than 0.2% for any question.

Table 23

June 1987 Social Studies 30 Diploma Examination Blueprint
Part B: Written Response

| Description of Writing Assignment | Reporting Category | Proportion of Total Mark (%) |
|---|---|---|
| Students are required to write one complete and unified essay that presents a position on a given issue. | 1. Description of examples or case studies | 10% |
| | 2. Description of value positions | 5% |
| | 3. Defence of position | 10% |
| | 4. Quality of language and expression | 5% |
| | | 30% |

Table 24

Percentage Distribution of Scores on Social Studies 30: Part B

| Score Scale Points | Reporting Category | | | |
|---|---|---|---|---|
| | Description of Examples | Description of Value Positions | Defence of Position | Quality of Expression |
| 5 (Exceptional) | 3.1 | 2.2 | 1.8 | 2.6 |
| 4 (Proficient) | 19.3 | 14.5 | 14.9 | 22.5 |
| 3 (Satisfactory) | 41.2 | 40.6 | 43.2 | 58.5 |
| 2 (Limited) | 28.0 | 30.5 | 34.2 | 15.2 |
| 1 (Poor) | 7.5 | 11.2 | 5.4 | 0.9 |
| 0 (Insufficient or No Response) | 1.1 | 0.9 | 0.4 | 0.2 |

## SECTION 6: MATHEMATICS 30 DIPLOMA EXAMINATION

The Mathematics 30 Diploma Examination consists of both multiple-choice questions (worth 80% of the total examination mark) and written-response questions (worth 20% of the total examination mark).

Table 25 contains percentage distributions for school awarded marks, diploma examination marks, and final blended marks in Mathematics 30. Table 26 contains averages and standard deviations for the written-response questions and the multiple-choice questions. Averages are based on raw scores, which are the number of marks obtained on each part of the examination. The total marks possible are identified for the written-response and multiple-choice components.

Averages are based on the results achieved by 9 681 students. Differences between total averages and component averages are due to rounding.

Table 25

Provincial Percentages of A, B, C, and F Grades, Averages, and Standard Deviations of Scores
Mathematics 30

| Score (%) | School Awarded Mark | Diploma Examination Mark | Final Blended Mark |
|---|---|---|---|
| A (80-100) | 19.1 | 23.7 | 20.5 |
| B (65-79) | 29.3 | 27.5 | 28.5 |
| C (50-64) | 38.8 | 26.1 | 37.6 |
| F (0-49) | 12.8 | 22.7 | 13.4 |
| Average (%) | 64.7 | 64.4 | 65.0 |
| Standard Deviation | 14.7 | 17.9 | 15.5 |

Table 26

Multiple-Choice and Written-Response Raw Score Totals
Mathematics 30

| Examination Section | Total Marks | Weighting (%) | Average | Standard Deviation |
|---|---|---|---|---|
| Written Response | 13 | 20 | 6.8 | 3.8 |
| Multiple Choice | 52 | 80 | 35.1 | 8.6 |

Table 27

June 1987 Mathematics 30 Diploma Examination Blueprint

| | Questions By Cognitive Level | | | | |
|---|---|---|---|---|---|
| Subject Matter | Knowledge | Comprehension | Application | Higher Mental Activities | Examination Emphasis |
| Trigonometry | 1 | 2,3,5,6, 7,8,9 | 10,11,12,13 [1] | 4 | 25% |
| Quadratic Relations | 20,24,25 | 14,26,27 | 15,16,18, 19,21,22,23 | 17 | 22% |
| Sequences, Series, Limits | 35 | 32,33,34 [3] | 29,30,31,36 | 28 | 18% |
| Statistics | | 37,40 | 38,39,41 [2] | 42 | 15% |
| Logarithms | 44 | 43,47 | 46,48 | 45 | 9% |
| Polynomial Functions | | 49,50 [4] | 52 | 51 | 11% |
| Examination Emphasis | 9% | 39% | 43% | 9% | 100% |

NOTE: Numbers in brackets [ ] indicate the written-response questions.

Table 28

Provincial Raw Score Averages for Subtests
Mathematics 30

| Subtest | Total Marks Possible | | | Raw Score Averages | | |
|---|---|---|---|---|---|---|
| | Written Response | Multiple Choice | Total | Written Response | Multiple Choice | Total |
| Trigonometry | 3 | 13 | 16 | 1.1 | 8.6 | 9.7 |
| Quadratic Relations | 0 | 14 | 14 | 0.0 | 9.5 | 9.5 |
| Sequences, Series, and Limits | 3 | 9 | 12 | 1.4 | 6.2 | 7.6 |
| Statistics | 4 | 6 | 10 | 2.4 | 4.6 | 7.0 |
| Logarithms | 0 | 6 | 6 | 0.0 | 3.7 | 3.7 |
| Polynomial Functions | 3 | 4 | 7 | 1.7 | 2.6 | 4.3 |

Table 29

Provincial Raw Score Averages for Cognitive Levels
Mathematics 30

| Subtest | Total Marks Possible | | | Raw Score Averages | | |
|---|---|---|---|---|---|---|
| | Written Response | Multiple Choice | Total | Written Response | Multiple Choice | Total |
| Knowledge | 0 | 6 | 6 | 0.0 | 4.4 | 4.4 |
| Comprehension | 6 | 19 | 25 | 3.2 | 13.2 | 16.4 |
| Application | 7 | 21 | 28 | 3.6 | 14.6 | 18.2 |
| Higher Mental Activities | 0 | 6 | 6 | 0.0 | 2.8 | 2.8 |

## Multiple-Choice Questions

The percentage of students choosing each response for each multiple-choice question is given in Table 30. The correct response (key) for each question is also identified. Schools may use this information in conjunction with the test and with school results on individual items to determine local strengths and weaknesses.

Table 30

Results for Individual Multiple-Choice Questions
Mathematics 30

| Item | Key | Distribution of Responses (%) | | | | Item | Key | Distribution of Responses (%) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | | | A | B | C | D |
| 1 | B | 3.6 | 89.1 | 1.7 | 5.5 | 27 | D | 4.6 | 6.9 | 4.2 | 84.3 |
| 2 | A | 60.7 | 18.9 | 12.1 | 8.2 | 28 | B | 6.4 | 69.7 | 9.9 | 13.7 |
| 3 | D | 6.9 | 14.2 | 16.4 | 62.4 | 29 | C | 17.0 | 12.9 | 63.8 | 6.0 |
| 4 | A | 37.0 | 27.3 | 24.5 | 10.2 | 30 | C | 5.0 | 4.0 | 84.2 | 6.8 |
| 5 | C | 4.5 | 8.0 | 78.2 | 9.1 | 31 | C | 11.6 | 6.3 | 71.8 | 10.0 |
| 6 | B | 10.9 | 67.2 | 9.0 | 12.8 | 32 | B | 11.5 | 71.3 | 6.7 | 10.4 |
| 7 | B | 14.3 | 66.0 | 11.4 | 8.0 | 33 | A | 71.5 | 15.8 | 6.3 | 6.3 |
| 8 | A | 76.6 | 7.7 | 5.8 | 9.7 | 34 | B | 12.0 | 66.9 | 14.3 | 6.5 |
| 9 | D | 5.5 | 13.0 | 31.7 | 49.4 | 35 | C | 17.6 | 8.7 | 58.0 | 15.6 |
| 10 | D | 5.1 | 5.7 | 8.4 | 80.5 | 36 | C | 5.8 | 12.5 | 59.7 | 21.9 |
| 11 | D | 7.0 | 14.4 | 9.6 | 68.9 | 37 | D | 1.5 | 4.9 | 3.1 | 90.5 |
| 12 | B | 4.5 | 77.6 | 9.4 | 8.3 | 38 | A | 83.0 | 5.2 | 4.2 | 7.5 |
| 13 | B | 37.3 | 42.7 | 12.9 | 6.7 | 39 | C | 7.3 | 12.0 | 75.9 | 4.6 |
| 14 | C | 7.8 | 4.4 | 78.0 | 9.6 | 40 | A | 83.6 | 9.1 | 5.3 | 2.0 |
| 15 | D | 4.6 | 15.9 | 7.5 | 71.9 | 41 | C | 4.6 | 8.7 | 82.2 | 4.5 |
| 16 | B | 5.2 | 76.5 | 11.4 | 6.7 | 42 | D | 11.0 | 33.0 | 16.7 | 39.0 |
| 17 | A | 41.4 | 27.3 | 20.1 | 10.9 | 43 | A | 61.6 | 12.7 | 3.9 | 21.7 |
| 18 | A | 67.9 | 10.4 | 16.0 | 5.5 | 44 | A | 78.9 | 10.9 | 6.1 | 4.1 |
| 19 | B | 9.3 | 41.3 | 35.7 | 13.4 | 45 | A | 52.1 | 27.0 | 7.9 | 12.9 |
| 20 | C | 12.5 | 8.1 | 75.5 | 3.9 | 46 | C | 19.7 | 8.2 | 65.6 | 6.1 |
| 21 | C | 4.1 | 6.9 | 67.5 | 21.5 | 47 | C | 32.1 | 24.7 | 33.8 | 9.2 |
| 22 | D | 2.1 | 1.9 | 26.3 | 69.7 | 48 | C | 7.1 | 9.3 | 74.6 | 8.8 |
| 23 | B | 9.3 | 68.4 | 13.6 | 8.6 | 49 | D | 13.1 | 17.2 | 6.6 | 63.0 |
| 24 | D | 9.7 | 8.1 | 4.7 | 77.4 | 50 | B | 5.8 | 85.5 | 4.0 | 4.7 |
| 25 | A | 58.0 | 7.1 | 6.0 | 28.7 | 51 | D | 24.0 | 10.9 | 22.4 | 42.0 |
| 26 | A | 65.4 | 13.8 | 12.2 | 8.5 | 52 | D | 7.1 | 12.5 | 13.3 | 65.3 |

*The sum of the percentages for some questions is less than 100% because the No Response category is not included. This category does not exceed 1.7% for any question.

Table 31

Distribution of Marks for Written-Response Questions
Mathematics 30

| Question | NR* | Students Obtaining Each Mark (%) | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 2.6 | 50.0 | 12.6 | 3.4 | 31.3 | | | |
| 2 | 5.3 | 20.2 | 5.7 | 10.3 | 18.0 | 40.6 | | |
| 3 | 6.6 | 24.0 | 14.2 | 38.9 | 16.4 | | | |
| 4 | 14.6 | 17.1 | 10.1 | 12.0 | 46.2 | | | |

*No Response

The total number of marks possible, the average mark awarded to students, and the difficulty level for each written-response question are summarized in Table 32. The difficulty level is the average divided by total marks possible.

Table 32

Average Marks Awarded for Written-Response Questions
Mathematics 30

| Question | Total Marks | Average | Difficulty Level |
|---|---|---|---|
| 1 | 3 | 1.1 | 0.38 |
| 2 | 4 | 2.4 | 0.61 |
| 3 | 3 | 1.4 | 0.47 |
| 4 | 3 | 1.7 | 0.58 |

## SECTION 7: BIOLOGY 30 DIPLOMA EXAMINATION

The Biology 30 Diploma Examination consists of both multiple-choice questions (worth 80% of the total examination mark) and written-response questions (worth 20% of the total examination mark).

Table 33 contains percentage distributions for school awarded marks, diploma examination marks, and final blended marks in Biology 30. Table 34 contains averages and standard deviations for the written-response questions and the multiple-choice questions. Averages are based on raw scores, which are the number of marks obtained on each part of the examination. The total marks possible are identified for the written-response and multiple-choice components.

Averages are based on the results achieved by 10 284 students. Differences between total averages and component averages are due to rounding.

Table 33

Provincial Percentages of A, B, C, and F Grades, Averages, and Standard Deviations of Scores
Biology 30

| Score (%) | School Awarded Mark | Diploma Examination Mark | Final Blended Mark |
|---|---|---|---|
| A (80-100) | 20.3 | 26.0 | 23.1 |
| B (65-79) | 35.2 | 25.9 | 30.3 |
| C (50-64) | 36.0 | 24.0 | 33.3 |
| F (0-49) | 8.4 | 24.1 | 13.2 |
| Average (%) | 66.7 | 64.6 | 66.1 |
| Standard Deviation | 13.1 | 18.8 | 15.3 |

Table 34

Multiple-Choice and Written-Response Raw Score Totals
Biology 30

| Examination Section | Total Marks | Weighting (%) | Average | Standard Deviation |
|---|---|---|---|---|
| Written Response | 19 | 20 | 10.7 | 4.7 |
| Multiple Choice | 80 | 80 | 53.2 | 14.5 |

Table 35

June 1987 Biology 30 Diploma Examination Blueprint

| Subject Matter | Questions By Cognitive Level: Knowledge | Comprehension and Application | Higher Mental Activities | Examination Emphasis |
|---|---|---|---|---|
| Cellular Processes | 1 | 2,3,4,5,6 [1] | 7 | 9% |
| Homeostatic Mechanisms | 8 | 9,10 [2] | | 5% |
| Nutrition | 11,12,13, 14,16 | 15,17,18, 19,20,21 | 22,23 [3] | 16% |
| Circulation | 25,26,27, 28,30 | 24,29,31, 32,33 | 34,35 [4] | 14% |
| Gas Exchange | 36,37,38 | 39,40 | 41 | 6% |
| Metabolism | 42,43 | 44,45 | | 4% |
| Excretion | 46,47,48 | 49,50,51,52,54 [5] | 53 | 15% |
| Nervous & Hormonal Co-ordination | 55,56,58, 59,63 | 57,60,61,62,64, 65,66,67 [6] | 68,69 | 17% |
| Movement | 70 | 71,72 | | 3% |
| Human Reproduction | 73,74,75,78 | 76,77,79,80 [7] | | 11% |
| Examination Emphasis | 30% | 56% | 14% | 100% |

NOTE: Numbers in brackets [ ] indicate the written-response questions. In the table above, those questions identified with science process skills from the multiple-choice section of the examination are 5, 17, 19, 22, 23, 31, 34, 35, 41, 49, 53, 68, and 69; those from the written-response section are 2, 3, 4, and 7. In the examination, science process skills received an emphasis of 22%.

Table 36

Provincial Raw Score Averages for Subtests
Biology 30

| Subtest | Total Marks Possible | | | Raw Score Averages | | |
|---|---|---|---|---|---|---|
| | Written Response | Multiple Choice | Total | Written Response | Multiple Choice | Total |
| Cellular Processes | 2 | 7 | 9 | 1.1 | 4.8 | 6.0 |
| Homeostatic Mechanisms | 2 | 3 | 5 | 1.5 | 2.0 | 3.5 |
| Nutrition | 3 | 13 | 16 | 1.9 | 8.5 | 10.4 |
| Circulation | 2 | 12 | 14 | 1.2 | 8.5 | 9.7 |
| Gas Exchange | 0 | 6 | 6 | 0.0 | 4.2 | 4.2 |
| Metabolism | 0 | 4 | 4 | 0.0 | 2.5 | 2.5 |
| Excretion | 6 | 9 | 15 | 2.7 | 4.9 | 7.6 |
| Nervous & Hormonal Co-ordination | 2 | 15 | 17 | 1.2 | 10.0 | 11.2 |
| Movement | 0 | 3 | 3 | 0.0 | 2.0 | 2.0 |
| Human Reproduction | 2* | 8 | 10 | 1.2 | 5.8 | 7.0 |
| Process Skills | 9 | 13 | 22 | 5.7 | 8.8 | 14.5 |

*Written-response question 7b was deleted from the examination because its wording lacked precision and thus was open to differences in interpretation.

Table 37

Provincial Raw Score Averages for Cognitive Levels
Biology 30

| Cognitive Levels | Total Marks Possible | | | Raw Score Averages | | |
|---|---|---|---|---|---|---|
| | Written Response | Multiple Choice | Total | Written Response | Multiple Choice | Total |
| Knowledge | 0 | 30 | 30 | 0.0 | 20.2 | 20.2 |
| Comprehension and Application | 14 | 41 | 55 | 7.7 | 26.7 | 34.4 |
| Higher Mental Activities | 5 | 9 | 14 | 3.0 | 6.3 | 9.3 |

Multiple-Choice Questions

The percentage of students choosing each response for each multiple-choice question is given in Table 38. The correct response (key) for each question is also identified. Schools may use this information in conjunction with the test and with school results on individual items to determine local strengths and weaknesses.

Table 38

Results for Individual Multiple-Choice Questions
Biology 30

| Item | Key | Distribution of Responses (%) A | B | C | D | Item | Key | Distribution of Responses (%) A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 81.7 | 9.5 | 4.3 | 4.4 | 41 | C | 21.9 | 5.9 | 62.4 | 9.8 |
| 2 | B | 5.6 | 43.1 | 34.6 | 16.7 | 42 | B | 6.4 | 68.2 | 11.2 | 14.1 |
| 3 | C | 13.4 | 10.4 | 73.1 | 3.0 | 43 | B | 20.0 | 57.3 | 10.8 | 11.8 |
| 4 | B | 22.9 | 59.5 | 2.8 | 14.8 | 44 | A | 52.8 | 21.1 | 7.1 | 18.9 |
| 5 | D | 2.5 | 2.2 | 22.4 | 72.8 | 45 | C | 21.0 | 7.9 | 66.5 | 4.6 |
| 6 | C | 4.0 | 3.3 | 87.8 | 4.8 | 46 | C | 18.5 | 29.8 | 44.9 | 6.7 |
| 7 | D | 9.2 | 15.2 | 10.2 | 65.3 | 47 | B | 14.8 | 55.3 | 4.5 | 25.4 |
| 8 | A | 86.1 | 6.9 | 3.2 | 3.8 | 48 | D | 14.0 | 7.8 | 14.4 | 63.7 |
| 9 | B | 17.0 | 58.1 | 8.6 | 16.3 | 49 | B | 8.8 | 61.2 | 10.5 | 19.4 |
| 10 | A | 53.3 | 12.6 | 21.4 | 12.6 | 50 | C | 8.0 | 12.6 | 68.0 | 11.3 |
| 11 | A | 67.4 | 8.1 | 3.5 | 21.0 | 51 | B | 31.1 | 52.2 | 7.0 | 9.6 |
| 12 | D | 8.1 | 9.0 | 10.2 | 72.7 | 52 | C | 5.3 | 20.2 | 57.2 | 17.1 |
| 13 | D | 25.1 | 1.9 | 11.3 | 61.7 | 53 | B | 15.9 | 51.4 | 21.4 | 11.4 |
| 14 | C | 7.8 | 11.9 | 62.1 | 18.2 | 54 | B | 20.2 | 39.0 | 6.2 | 34.6 |
| 15 | A | 38.7 | 15.1 | 13.2 | 33.0 | 55 | C | 11.5 | 11.0 | 55.0 | 22.5 |
| 16 | B | 15.5 | 41.9 | 35.4 | 7.2 | 56 | A | 61.3 | 12.3 | 8.2 | 18.2 |
| 17 | B | 10.8 | 61.5 | 10.1 | 17.6 | 57 | C | 8.9 | 9.0 | 70.2 | 11.9 |
| 18 | D | 1.2 | 1.4 | 36.2 | 61.1 | 58 | C | 10.0 | 9.8 | 75.3 | 4.8 |
| 19 | A | 79.9 | 13.7 | 3.1 | 3.2 | 59 | B | 15.2 | 75.5 | 3.3 | 6.1 |
| 20 | D | 7.4 | 4.8 | 1.7 | 86.1 | 60 | C | 5.6 | 2.5 | 90.0 | 1.9 |
| 21 | B | 17.3 | 54.9 | 7.5 | 20.3 | 61 | A | 63.8 | 9.3 | 15.0 | 11.8 |
| 22 | C | 5.5 | 2.8 | 73.4 | 18.3 | 62 | D | 2.9 | 2.2 | 27.6 | 67.1 |
| 23 | D | 5.7 | 2.6 | 1.4 | 90.3 | 63 | A | 56.5 | 29.1 | 8.6 | 5.8 |
| 24 | D | 5.0 | 2.7 | 2.2 | 90.1 | 64 | C | 11.2 | 27.9 | 54.4 | 6.5 |
| 25 | D | 36.6 | 9.3 | 4.7 | 49.5 | 65 | C | 9.1 | 13.5 | 66.4 | 11.0 |
| 26 | C | 4.6 | 12.0 | 75.6 | 7.8 | 66 | D | 17.4 | 12.9 | 10.2 | 59.5 |
| 27 | D | 3.8 | 7.1 | 8.2 | 80.9 | 67 | C | 8.4 | 29.1 | 46.9 | 15.5 |
| 28 | A | 71.1 | 5.5 | 7.8 | 15.6 | 68 | D | 3.3 | 5.4 | 4.5 | 86.8 |
| 29 | C | 1.7 | 7.5 | 89.0 | 1.8 | 69 | C | 2.1 | 5.8 | 65.8 | 26.2 |
| 30 | C | 10.6 | 4.0 | 76.8 | 8.6 | 70 | B | 8.7 | 83.8 | 4.9 | 2.5 |
| 31 | D | 16.7 | 7.7 | 29.8 | 45.8 | 71 | D | 10.4 | 14.7 | 22.2 | 52.7 |
| 32 | A | 78.4 | 13.4 | 4.1 | 4.1 | 72 | A | 62.0 | 5.4 | 27.7 | 4.9 |
| 33 | B | 22.5 | 63.2 | 7.5 | 6.7 | 73 | B | 12.7 | 77.4 | 3.6 | 6.3 |
| 34 | B | 17.0 | 80.3 | 1.1 | 1.6 | 74 | D | 5.6 | 22.7 | 6.9 | 64.8 |
| 35 | A | 49.7 | 12.8 | 24.4 | 13.0 | 75 | A | 74.1 | 5.5 | 9.7 | 10.6 |
| 36 | A | 52.8 | 7.6 | 35.6 | 4.0 | 76 | B | 9.8 | 79.6 | 7.4 | 3.2 |
| 37 | D | 4.5 | 12.1 | 9.0 | 74.4 | 77 | D | 13.2 | 4.0 | 3.4 | 79.4 |
| 38 | D | 2.0 | 4.1 | 8.8 | 85.0 | 78 | A | 65.5 | 17.6 | 2.1 | 14.8 |
| 39 | C | 12.6 | 9.4 | 69.7 | 8.3 | 79 | A | 54.8 | 11.3 | 24.9 | 9.1 |
| 40 | A | 79.5 | 6.3 | 10.5 | 3.6 | 80 | C | 6.0 | 8.0 | 82.1 | 3.7 |

*The sum of the percentages for some questions is less than 100% because the No Response category is not included. This category does not exceed 0.1% for any question.

Table 39

Distribution of Marks for Written-Response Questions
Biology 30

| Question | Percentage of Students Obtaining Each Mark | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | NR* | 0 | 1 | 2 | 3 | 4 | 5 | 6 |
| 1 | 5.8 | 33.2 | 10.4 | 50.5 | | | | |
| 2 | 1.5 | 7.8 | 32.9 | 57.7 | | | | |
| 3 | 2.1 | 19.1 | 17.8 | 15.4 | 45.6 | | | |
| 4 | 0.9 | 25.3 | 32.6 | 41.1 | | | | |
| 5 | 6.4 | 5.7 | 18.3 | 21.8 | 14.9 | 12.6 | 11.4 | 9.0 |
| 6 | 7.0 | 30.3 | 4.0 | 58.7 | | | | |
| 7 | 2.8 | 16.6 | 44.4 | 36.2 | | | | |

*No Response

The total number of marks possible, the average mark awarded to students, and the difficulty level for each written-response question are summarized in Table 40. The difficulty level is the average divided by the total marks possible.

Table 40

Average Marks Awarded for Written-Response Questions
Biology 30

| Question | Total Marks | Average | Difficulty Level |
|---|---|---|---|
| 1 | 2 | 1.1 | 0.56 |
| 2 | 2 | 1.5 | 0.74 |
| 3 | 3 | 1.9 | 0.62 |
| 4 | 2 | 1.2 | 0.57 |
| 5 | 6 | 2.7 | 0.45 |
| 6 | 2 | 1.2 | 0.61 |
| 7 | 2 | 1.2 | 0.58 |

## SECTION 8: CHEMISTRY 30 DIPLOMA EXAMINATION

The Chemistry 30 Diploma Examination consists of both multiple-choice questions (worth 80% of the total examination mark) and written-response questions (worth 20% of the total examination mark).

Table 41 contains percentage distributions for school awarded marks, diploma examination marks, and final blended marks in Chemistry 30. Table 42 contains averages and standard deviations for the written-response questions and the multiple-choice questions. Averages are based on raw scores, which are the number of marks obtained on each part of the examination. The total marks possible are identified for the written-response and multiple-choice components.

Averages are based on the results achieved by 8 932 students. Differences between total averages and component averages are due to rounding.

Table 41

Provincial Percentages of A, B, C, and F Grades, Averages, and Standard Deviations of Scores
Chemistry 30

| Score (%) | School Awarded Marks | Diploma Examination Mark | Final Blended Mark |
|---|---|---|---|
| A (80-100) | 23.6 | 27.8 | 24.8 |
| B (65-79) | 36.3 | 29.0 | 34.7 |
| C (50-64) | 32.1 | 25.7 | 30.2 |
| F (0-49) | 8.0 | 17.4 | 10.3 |
| Average (%) | 68.0 | 66.9 | 67.9 |
| Standard Deviation | 13.7 | 17.6 | 14.9 |

Table 42

Multiple-Choice and Written-Response Raw Score Totals
Chemistry 30

| Examination Section | Total Marks | Weighting (%) | Average | Standard Deviation |
|---|---|---|---|---|
| Written Response | 14 | 20 | 7.2 | 3.9 |
| Multiple Choice | 56 | 80 | 39.6 | 9.3 |

Table 43

June 1987 Chemistry 30 Diploma Examination Blueprint

| | Questions By Cognitive Level | | | |
|---|---|---|---|---|
| Subject Matter | Knowledge | Comprehension and Application | Higher Mental Activities | Examination Emphasis |
| Chemical Energetics | 1,2,3,4,6,8 | 5,9,10,11,12, 14,15,16 [1] | 7,13,17,18 | 33% |
| Acids and Bases | 19,21,24,25, 27,29,32 | 20,22,26,28, 31,33,35,36, 37 [2] | 23,30,34 | 33% |
| Oxidation-Reduction | 42,43,49,52, 55,56 | 38,39,41,44, 45,46,47,50, 51,53 [3] | 40,48,54 | 34% |
| Examination Emphasis | 37% | 49% | 14% | 100% |

NOTE: Numbers in brackets [] indicate the written-response questions.

In the table above, those questions identified with science process skills from the multiple-choice section of the examination are 1, 2, 5, 6, 7, 10, 11, 12, 13, 15, 16, 20, 22, 23, 28, 30, 31, 34, 36, 37, 40, 45, 46, 47, 48, 50, 51, 52, and 54; those from the written-response sections are 1, 2, and 3. In the examination, science process skills received an emphasis of 61%.

Table 44

Provincial Raw Score Averages for Subtests
Chemistry 30

| Subtest | Total Marks Possible | | | Raw Score Averages | | |
|---|---|---|---|---|---|---|
| | Written Response | Multiple Choice | Total | Written Response | Multiple Choice | Total |
| Chemical Energetics | 5 | 18 | 23 | 2.5 | 12.9 | 15.5 |
| Acids and Bases | 4 | 19 | 23 | 1.3 | 13.7 | 15.0 |
| Oxidation-Reduction | 5 | 19 | 24 | 3.3 | 13.0 | 16.3 |
| Process Skills | 14 | 29 | 43 | 7.2 | 20.0 | 27.1 |

Table 45

Provincial Raw Score Averages for Cognitive Levels
Chemistry 30

| Cognitive Levels | Total Marks Possible | | | Raw Score Averages | | |
|---|---|---|---|---|---|---|
| | Written Response | Multiple Choice | Total | Written Response | Multiple Choice | Total |
| Knowledge | 0 | 19 | 19 | 0.0 | 13.6 | 13.6 |
| Comprehension and Application | 14 | 27 | 41 | 7.2 | 19.6 | 26.7 |
| Higher Mental Activities | 0 | 10 | 10 | 0.0 | 6.5 | 6.5 |

Multiple-Choice Questions

The percentage of students choosing each response for each multiple-choice question is given in Table 46. The correct response (key) for each question is also identified. Schools may use this information in conjunction with the test and with school results on individual items to determine local strengths and weaknesses.

Table 46

Results for Individual Multiple-Choice Questions
Chemistry 30

| Item | Key | Distribution of Responses (%) A | B | C | D | Item | Key | Distribution of Responses (%) A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A | 81.8 | 10.5 | 4.6 | 3.0 | 29 | D | 1.0 | 8.2 | 5.4 | 85.5 |
| 2 | B | 4.2 | 71.0 | 10.5 | 14.3 | 30 | D | 29.5 | 6.7 | 12.3 | 51.4 |
| 3 | C | 3.0 | 9.0 | 73.4 | 14.5 | 31 | D | 9.6 | 2.4 | 3.8 | 84.1 |
| 4 | B | 6.8 | 86.7 | 5.4 | 1.1 | 32 | C | 8.2 | 2.4 | 79.1 | 10.3 |
| 5 | C | 5.0 | 3.5 | 65.1 | 26.4 | 33 | B | 10.6 | 74.4 | 9.6 | 5.3 |
| 6 | B | 5.4 | 67.8 | 12.3 | 14.4 | 34 | B | 11.3 | 64.3 | 8.9 | 15.5 |
| 7 | C | 12.4 | 21.2 | 39.5 | 26.6 | 35 | C | 6.4 | 8.4 | 68.4 | 16.7 |
| 8 | D | 12.1 | 9.1 | 19.3 | 59.4 | 36 | A | 77.4 | 8.3 | 10.4 | 3.8 |
| 9 | B | 4.0 | 86.1 | 5.1 | 4.8 | 37 | B | 16.0 | 51.3 | 16.0 | 16.2 |
| 10 | C | 14.6 | 5.9 | 75.0 | 4.2 | 38 | C | 13.1 | 4.7 | 70.1 | 12.0 |
| 11 | D | 35.8 | 5.1 | 4.0 | 55.1 | 39 | C | 3.2 | 11.9 | 81.1 | 3.8 |
| 12 | B | 6.4 | 80.1 | 4.4 | 9.2 | 40 | B | 16.6 | 61.5 | 13.7 | 8.1 |
| 13 | C | 2.8 | 20.1 | 71.3 | 5.6 | 41 | B | 9.5 | 80.7 | 6.2 | 3.5 |
| 14 | A | 78.9 | 3.6 | 3.2 | 14.2 | 42 | A | 67.5 | 20.1 | 5.1 | 7.3 |
| 15 | A | 79.0 | 8.9 | 8.4 | 3.4 | 43 | D | 9.2 | 20.2 | 26.0 | 44.5 |
| 16 | D | 2.5 | 5.9 | 14.8 | 76.6 | 44 | C | 10.6 | 21.2 | 59.2 | 8.6 |
| 17 | A | 80.1 | 4.3 | 8.1 | 7.5 | 45 | A | 81.4 | 9.7 | 3.4 | 5.4 |
| 18 | C | 11.7 | 14.6 | 64.8 | 8.4 | 46 | B | 3.8 | 76.8 | 6.7 | 12.6 |
| 19 | D | 8.3 | 7.2 | 6.6 | 77.9 | 47 | C | 16.0 | 11.0 | 67.7 | 5.2 |
| 20 | A | 51.8 | 21.8 | 16.0 | 10.4 | 48 | B | 1.2 | 72.9 | 24.6 | 1.3 |
| 21 | A | 56.6 | 10.6 | 7.6 | 25.1 | 49 | D | 6.1 | 5.5 | 13.5 | 74.9 |
| 22 | B | 8.2 | 77.9 | 8.7 | 5.2 | 50 | A | 64.1 | 12.4 | 12.0 | 11.3 |
| 23 | C | 3.6 | 2.7 | 88.9 | 4.7 | 51 | B | 9.7 | 69.5 | 12.9 | 7.7 |
| 24 | C | 9.1 | 8.8 | 75.2 | 6.8 | 52 | D | 7.6 | 8.7 | 11.5 | 72.1 |
| 25 | B | 4.4 | 84.8 | 4.2 | 6.5 | 53 | B | 10.3 | 64.2 | 21.2 | 4.1 |
| 26 | A | 87.4 | 1.8 | 5.0 | 5.8 | 54 | A | 49.1 | 35.0 | 11.7 | 3.8 |
| 27 | D | 8.4 | 6.6 | 26.3 | 58.7 | 55 | A | 79.6 | 7.4 | 11.6 | 1.1 |
| 28 | C | 4.0 | 3.8 | 67.6 | 24.5 | 56 | D | 10.1 | 8.6 | 18.1 | 62.1 |

*The sum of the percentages for some questions is less than 100% because the No Response category is not included. This category does not exceed 1.1% for any question.

Table 47

Distribution of Marks for Written-Response Questions
Chemistry 30

| Question | Students Obtaining Each Mark (%) | | | | | | |
|---|---|---|---|---|---|---|---|
| | NR* | 0 | 1 | 2 | 3 | 4 | 5 |
| 1 | 3.7 | 22.7 | 12.0 | 11.2 | 11.2 | 12.3 | 26.9 |
| 2 | 8.3 | 24.3 | 25.2 | 23.3 | 13.8 | 5.1 | |
| 3 | 5.0 | 8.5 | 6.2 | 9.1 | 17.9 | 16.6 | 36.7 |

*No Response

The total number of marks possible, the average mark awarded to students, and the difficulty level for each written-response question are summarized in Table 48. The difficulty level is the average divided by total marks possible.

Table 48

Average Marks Awarded for Written-Response Questions
Chemistry 30

| Question | Total Marks | Average | Difficulty Level |
|---|---|---|---|
| 1 | 5 | 2.5 | 0.50 |
| 2 | 4 | 1.3 | 0.33 |
| 3 | 5 | 3.3 | 0.66 |

## SECTION 9: PHYSICS 30 DIPLOMA EXAMINATION

The Physics 30 Diploma Examination consists of both multiple-choice questions (worth 80% of the total examination mark) and written-response questions (worth 20% of the total examination mark).

Table 49 contains percentage distributions for school awarded marks, diploma examination marks, and final blended marks in Physics 30. Table 50 contains averages and standard deviations for the written-response questions and the multiple-choice questions. Averages are based on raw scores, which are the number of marks obtained on each part of the examination. The total marks possible are identified for the written-response and multiple-choice components.

Averages are based on the results achieved by 5 183 students. Differences between total averages and component averages are due to rounding.

Table 49

Provincial Percentages of A, B, C, and F Grades, Averages, and Standard Deviations of Scores
Physics 30

| Score (%) | School Awarded Marks | Diploma Examination Mark | Final Blended Mark |
|---|---|---|---|
| A (80-100) | 26.2 | 22.9 | 22.8 |
| B (65-79) | 38.4 | 25.5 | 33.3 |
| C (50-64) | 29.0 | 29.2 | 33.5 |
| F (0-49) | 6.3 | 22.4 | 10.4 |
| Average (%) | 69.4 | 63.9 | 67.1 |
| Standard Deviation | 13.2 | 17.9 | 14.7 |

Table 50

Multiple-Choice and Written-Response Raw Score Totals
Physics 30

| Examination Section | Total Marks | Weighting (%) | Average | Standard Deviation |
|---|---|---|---|---|
| Written Response | 14 | 20 | 6.3 | 3.8 |
| Multiple Choice | 56 | 80 | 38.4 | 9.5 |

Table 51

June 1987 Physics 30 Diploma Examination Blueprint

| | Questions By Cognitive Level | | | |
|---|---|---|---|---|
| Subject Matter | Knowledge | Comprehension and Application | Higher Mental Activities | Examination Emphasis |
| Light | 1,3,4, 5,6,10 | 2,11 [2] | 7,8,9 | 23% |
| Electric and Magnetic Fields | 13,18,21, 23,24 | 12,14,15,16,17, 19,20,22,25 | [3] | 27% |
| EM Radiation | 26,29,32, 34,35 | 27,30,31,33 | 28 | 14% |
| Structure of Matter | 36,42,44 | 38,39,40,41,43 [1] | 37,45 | 20% |
| Modern Physical Theories | 46,50,53,54, 55 | 47,48,49,51, 52,56 | | 16% |
| Examination Emphasis | 34% | 50% | 16% | 100% |

NOTE: Numbers in brackets [] indicate the written-response questions.

In the table above, those questions identified with science process skills from the multiple-choice section of the examination are 2, 7, 8, 9, 19, 20, 28, 31, 33, 37, 38, 40, 43, 45, and 52; those from the written-response sections are 1, 2, and 3. In the examination, science process skills received an emphasis of 41%.

Table 52

Provincial Raw Score Averages for Subtests
Physics 30

| Subtest | Total Marks Possible | | | Raw Score Averages | | |
|---|---|---|---|---|---|---|
| | Written Response | Multiple Choice | Total | Written Response | Multiple Choice | Total |
| Light | 5 | 11 | 16 | 2.6 | 7.9 | 10.5 |
| Electric and Magnetic Fields | 5 | 14 | 19 | 1.8 | 10.2 | 11.9 |
| EM Radiation | 0 | 10 | 10 | 0.0 | 6.4 | 6.4 |
| Structure of Matter | 4 | 10 | 14 | 2.0 | 7.0 | 8.9 |
| Modern Physical Theories | 0 | 11 | 11 | 0.0 | 7.0 | 7.0 |
| Process Skills | 14 | 15 | 29 | 6.3 | 9.1 | 15.4 |

Table 53

Provincial Raw Score Averages for Cognitive Levels
Physics 30

| Cognitive Levels | Total Marks Possible | | | Raw Score Averages | | |
|---|---|---|---|---|---|---|
| | Written Response | Multiple Choice | Total | Written Response | Multiple Choice | Total |
| Knowledge | 0 | 24 | 24 | 0.0 | 16.7 | 16.7 |
| Comprehension and Application | 9 | 26 | 35 | 4.6 | 18.3 | 22.9 |
| Higher Mental Activities | 5 | 6 | 11 | 1.8 | 3.4 | 5.1 |

## Multiple-Choice Questions

The percentage of students choosing each response for each multiple-choice question is given in Table 54. The correct response (key) for each question is also identified. Schools may use this information in conjunction with the test and with school results on individual items to determine local strengths and weaknesses.

Table 54

Results for Individual Multiple-Choice Questions
Physics 30

| Item | Key | Distribution of Responses (%) | | | | Item | Key | Distribution of Responses (%) | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | A | B | C | D | | | A | B | C | D |
| 1 | A | 80.2 | 3.8 | 2.5 | 13.3 | 29 | C | 14.3 | 15.4 | 54.3 | 16.0 |
| 2 | B | 5.5 | 78.8 | 7.4 | 8.2 | 30 | B | 9.8 | 76.3 | 9.1 | 4.5 |
| 3 | A | 81.3 | 9.3 | 7.0 | 2.4 | 31 | A | 61.0 | 22.5 | 10.6 | 5.8 |
| 4 | D | 1.3 | 3.2 | 7.9 | 87.5 | 32 | D | 2.4 | 3.1 | 6.8 | 87.7 |
| 5 | C | 4.0 | 7.5 | 84.6 | 3.9 | 33 | C | 15.9 | 8.1 | 46.5 | 29.4 |
| 6 | D | 7.6 | 8.2 | 4.1 | 80.1 | 34 | B | 4.0 | 79.4 | 15.2 | 1.4 |
| 7 | A | 37.8 | 24.6 | 27.7 | 9.9 | 35 | C | 9.9 | 7.3 | 59.6 | 23.2 |
| 8 | D | 6.3 | 6.7 | 10.0 | 76.8 | 36 | A | 65.4 | 12.3 | 17.1 | 5.1 |
| 9 | D | 4.7 | 7.1 | 43.3 | 44.7 | 37 | D | 7.0 | 15.4 | 15.8 | 61.4 |
| 10 | A | 64.3 | 15.2 | 14.5 | 6.0 | 38 | D | 9.1 | 19.3 | 13.6 | 57.8 |
| 11 | C | 11.4 | 15.6 | 69.7 | 2.8 | 39 | B | 3.3 | 81.1 | 5.7 | 9.8 |
| 12 | A | 76.1 | 2.0 | 20.7 | 1.2 | 40 | D | 3.5 | 10.6 | 6.4 | 79.4 |
| 13 | C | 3.7 | 6.1 | 75.2 | 14.9 | 41 | D | 3.8 | 4.0 | 3.2 | 89.0 |
| 14 | B | 2.8 | 79.4 | 8.9 | 8.8 | 42 | B | 5.9 | 88.9 | 2.6 | 2.6 |
| 15 | B | 12.3 | 73.5 | 11.4 | 2.6 | 43 | D | 12.9 | 7.0 | 9.7 | 70.2 |
| 16 | C | 8.8 | 5.0 | 79.6 | 6.1 | 44 | C | 8.1 | 13.0 | 49.0 | 29.8 |
| 17 | B | 5.2 | 83.7 | 5.3 | 5.8 | 45 | C | 13.0 | 30.4 | 51.3 | 4.7 |
| 18 | C | 7.6 | 0.6 | 91.3 | 0.5 | 46 | A | 42.7 | 6.7 | 16.9 | 33.6 |
| 19 | C | 4.9 | 4.7 | 81.7 | 8.7 | 47 | A | 80.2 | 5.1 | 11.6 | 3.0 |
| 20 | D | 19.6 | 12.2 | 9.5 | 58.1 | 48 | C | 4.1 | 14.1 | 73.0 | 8.8 |
| 21 | B | 17.5 | 52.5 | 15.3 | 14.7 | 49 | B | 21.4 | 64.4 | 8.6 | 5.3 |
| 22 | D | 7.8 | 9.0 | 30.5 | 52.7 | 50 | B | 12.0 | 59.6 | 23.0 | 5.3 |
| 23 | C | 21.7 | 11.0 | 48.2 | 19.1 | 51 | C | 6.4 | 8.5 | 79.1 | 5.6 |
| 24 | D | 2.1 | 10.3 | 4.0 | 83.5 | 52 | A | 34.0 | 24.2 | 16.3 | 25.5 |
| 25 | B | 5.9 | 77.9 | 6.0 | 10.0 | 53 | A | 56.1 | 11.9 | 14.2 | 17.3 |
| 26 | C | 5.7 | 11.1 | 40.3 | 42.7 | 54 | B | 9.8 | 79.1 | 4.4 | 6.5 |
| 27 | A | 69.0 | 12.5 | 10.4 | 8.1 | 55 | C | 9.4 | 9.9 | 72.0 | 8.2 |
| 28 | C | 16.1 | 10.2 | 66.6 | 6.6 | 56 | B | 16.0 | 53.6 | 11.6 | 15.6 |

*The sum of the percentages for some questions is less than 100% because the No Response category is not included. This category does not exceed 3.1% for any question.

Table 55

Distribution of Marks for Written-Response Questions
Physics 30

| Question | Students Obtaining Each Mark (%) | | | | | | |
|---|---|---|---|---|---|---|---|
| | NR* | 0 | 1 | 2 | 3 | 4 | 5 |
| 1 | 9.8 | 23.9 | 7.1 | 18.4 | 10.1 | 30.7 | |
| 2 | 1.9 | 15.2 | 7.7 | 17.1 | 26.0 | 22.3 | 9.8 |
| 3 | 6.9 | 17.9 | 26.9 | 13.4 | 25.0 | 4.9 | 5.1 |

*No Response

The total number of marks possible, the average mark awarded to students, and the difficulty level for each written-response question are summarized in Table 56. The difficulty level is the average divided by total marks possible.

Table 56

Average Marks Awarded for Written-Response Questions
Physics 30

| Question | Total Marks | Average | Difficulty Level |
|---|---|---|---|
| 1 | 4 | 2.0 | 0.49 |
| 2 | 5 | 2.6 | 0.52 |
| 3 | 5 | 1.7 | 0.35 |

## SECTION 10: LANGUE ET LITTÉRATURE 30 DIPLOMA EXAMINATION

The Langue et Littérature 30 Diploma Examination consists of two parts: Part A: Written Response and Part B: Reading (Multiple Choice), each worth 50% of the total examination mark. January 1987 was the first administration of the Langue et Littérature 30 Examination.

Table 57 contains percentage distributions for school awarded marks, diploma examination marks, and final blended marks in Langue et Littérature 30. Table 58 contains averages and standard deviations for the written-response questions and the multiple-choice questions. Averages given in Table 58 are based on raw scores, which are the number of marks obtained on each part of the examination.

The total marks possible are identified for the written-response and multiple-choice components.

Averages in both tables are based on the results achieved by 191 students. Differences between total averages and component averages are due to rounding.

Table 57

Provincial Percentages of A, B, C, and F Grades, Averages, and Standard Deviations of Scores
Langue et Littérature 30

| Score (%) | School Awarded Mark | Diploma Examination Mark | Final Blended Mark |
|---|---|---|---|
| A (80-100) | 34.0 | 31.9 | 29.3 |
| B (65-79) | 45.5 | 49.2 | 52.4 |
| C (50-64) | 18.3 | 17.8 | 17.8 |
| F (0-49) | 2.1 | 1.0 | 0.5 |
| Average (%) | 73.0 | 74.1 | 73.8 |
| Standard Deviation | 10.9 | 9.9 | 9.3 |

Table 58

Multiple-Choice and Written-Response Raw Score Totals
Langue et Littérature 30

| Examination Section | Total Marks | Weighting (%) | Average | Standard Deviation |
|---|---|---|---|---|
| Part A: Written Response | 50 | 50 | 39.8 | 5.9 |
| Part B: Multiple Choice | 74 | 50 | 50.7 | 8.1 |

Table 59

June 1987 Langue et Littérature 30 Diploma Examination Blueprint
Part A: Written Response

| Description of the Writing Assignment | Reporting Category | Proportion of Total Mark |
|---|---|---|
| Minor Assignments | | |
| For both minor assignments, students will be given a personal situation or context in which they will be asked to develop an argument or to present information. | 1. Content | 15% |
| | 2. Writing Skills | 5% |
| Major Assignment | | |
| The major assignment sets a specific writing task but allows the student to choose relevant details (examples, illustrations) from literature studied in Langue et Littérature courses. The writing assignment will be related to a brief reading selection given in the exam. The assignment will require students to understand literal and implied meanings, and to synthesize thoughts clearly and correctly in writing. | 1. Total Impression | 5% |
| | 2. Content | 10% |
| | 3. Organization | 5% |
| | 4. Style | 5% |
| | 5. Matters of Convention | 5% |
| | | 50% |

Table 60

Percentage Distribution of Scores on Langue et Littérature 30: Part A
Minor Assignments (Personal Response and Critical Response)

| Score Scale Points | Minor Assignment 1 Reporting Category | | Minor Assignment 2 Reporting Category | |
|---|---|---|---|---|
| | Content | Writing Skills | Content | Writing Skills |
| 5 (Exceptional) | 33.2 | 27.5 | 26.4 | 21.8 |
| 4 (Proficient) | 46.1 | 52.9 | 48.7 | 56.0 |
| 3 (Satisfactory) | 18.7 | 19.7 | 21.8 | 22.3 |
| 2 (Limited) | 2.1 | 0.0 | 3.1 | 0.0 |
| 1 (Poor) | 0.0 | 0.0 | 0.0 | 0.0 |
| INS (Insufficient or No Response) | 0.0 | 0.0 | 0.0 | 0.0 |

Table 61

Percentage Distribution of Scores on Langue et Littérature 30: Part A
Major Assignment

| Score Scale Points | Reporting Category | | | | |
|---|---|---|---|---|---|
| | Total Impression | Content | Organization | Style | Matters of Convention |
| 5 (Exceptional) | 18.1 | 26.9 | 21.8 | 26.9 | 16.1 |
| 4 (Proficient) | 52.3 | 41.5 | 45.6 | 52.9 | 61.1 |
| 3 (Satisfactory) | 26.9 | 28.0 | 31.1 | 19.2 | 21.8 |
| 2 (Limited) | 1.6 | 2.6 | 0.5 | 0.0 | 0.0 |
| 1 (Poor) | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| INS (Insufficient or No Response) | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 |

Table 62

June 1987 Langue et Littérature 30 Diploma Examination Blueprint
Part B: Reading (Multiple Choice)

| Reporting Category | Questions by Cognitive Level: Literal Understanding | Inference and Application | Evaluation | Examination Emphasis |
|---|---|---|---|---|
| Understanding (Content) | 5,36,45,46, 49,62 | 11,15,18,20, 34,43,48,73 75*,77* | 26 | 10.6% |
| Critical Response (Form) | 2,16,19,22, 56*,66 | 1,6,12,13,14, 23,39,41,47, 50*,52,59,74, 76,80 | 21,54,60 | 15.0% |
| Interpretation (Human values and experiences) | | 3,4,10,17,25, 27,28*,29,30, 31,32,33,35, 38,40,42,44, 53,55,57,63, 64,68,72* | 7,8,9,24, 37,51,58, 61,65,67, 69,70,71, 78,79 | 24.4% |
| Examination Emphasis | 7.50% | 30.6% | 11.9% | 50% |

* Questions 28, 50, 56, 72, 75, 77 were deleted from the examination. A review of the examination results and item statistics revealed flaws in these questions.

Table 63

Raw Score Results for Langue et Littérature 30: Part B

| Reporting Category | Average | Standard Deviation |
|---|---|---|
| 1. Understanding (15 questions) | 10.4 | 2.1 |
| 2. Critical Response (22 questions) | 15.0 | 3.2 |
| 3. Interpretation (37 questions) | 25.3 | 4.5 |

Multiple-Choice Questions

The percentage of students choosing each response for each multiple-choice question is given in Table 64. The correct response (key) for each question is also identified. Schools may use this information in conjunction with the test and with school results on individual items to determine local strengths and weaknesses.

Table 64

Results for Individual Multiple-Choice Questions
Langue et Littérature 30

| Item | Key | Distribution of Responses (%) A | B | C | D | Item | Key | Distribution of Responses (%) A | B | C | D |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | C | 2.6 | 6.8 | 73.3 | 17.3 | 41 | C | 1.0 | 13.1 | 66.5 | 18.8 |
| 2 | C | 8.9 | 3.1 | 80.1 | 7.9 | 42 | C | 3.1 | 6.3 | 88.0 | 2.1 |
| 3 | B | 7.9 | 86.9 | 2.1 | 3.1 | 43 | A | 89.5 | 1.0 | 5.8 | 3.7 |
| 4 | B | 10.5 | 70.2 | 14.7 | 4.7 | 44 | C | 32.5 | 11.0 | 50.8 | 5.8 |
| 5 | C | 3.1 | 4.2 | 81.2 | 11.5 | 45 | B | 17.8 | 47.6 | 14.7 | 19.9 |
| 6 | C | 2.6 | 1.6 | 94.2 | 1.6 | 46 | D | 3.1 | 15.2 | 9.9 | 71.7 |
| 7 | D | 9.9 | 20.9 | 15.7 | 53.4 | 47 | D | 6.8 | 4.7 | 37.7 | 50.8 |
| 8 | A | 67.5 | 16.2 | 6.3 | 9.9 | 48 | C | 0.5 | 16.2 | 76.4 | 6.8 |
| 9 | C | 1.0 | 7.3 | 80.6 | 11.0 | 49 | D | 1.6 | 5.8 | 6.8 | 85.9 |
| 10 | A | 62.3 | 7.3 | 1.6 | 28.8 | 50 | QUESTION DELETED | | | | |
| 11 | A | 61.3 | 13.6 | 3.1 | 22.0 | 51 | B | 19.9 | 64.9 | 6.8 | 8.4 |
| 12 | D | 7.3 | 20.4 | 13.6 | 58.6 | 52 | B | 4.2 | 56.5 | 24.6 | 14.7 |
| 13 | B | 11.5 | 70.2 | 7.3 | 10.5 | 53 | B | 3.7 | 93.7 | 0.0 | 2.6 |
| 14 | C | 1.6 | 6.8 | 85.3 | 6.3 | 54 | A | 84.8 | 5.8 | 6.8 | 2.6 |
| 15 | B | 5.2 | 44.0 | 19.9 | 30.9 | 55 | D | 0.5 | 7.3 | 38.7 | 53.4 |
| 16 | A | 58.6 | 22.0 | 10.5 | 8.9 | 56 | QUESTION DELETED | | | | |
| 17 | D | 19.4 | 1.6 | 8.9 | 70.2 | 57 | D | 3.1 | 18.3 | 7.3 | 70.7 |
| 18 | A | 68.6 | 1.0 | 2.6 | 27.7 | 58 | B | 0.5 | 82.2 | 4.2 | 13.1 |
| 19 | B | 12.0 | 53.9 | 6.8 | 27.2 | 59 | C | 1.6 | 7.3 | 80.6 | 10.5 |
| 20 | A | 51.3 | 3.1 | 18.3 | 26.7 | 60 | A | 73.3 | 6.8 | 15.2 | 4.7 |
| 21 | A | 76.4 | 1.6 | 11.0 | 11.0 | 61 | C | 9.4 | 15.7 | 73.8 | 1.0 |
| 22 | B | 2.1 | 81.7 | 6.3 | 9.9 | 62 | B | 1.6 | 66.0 | 3.1 | 29.3 |
| 23 | D | 26.2 | 7.9 | 12.0 | 53.9 | 63 | A | 60.2 | 2.1 | 10.5 | 27.2 |
| 24 | D | 9.4 | 13.1 | 5.2 | 72.3 | 64 | D | 0.5 | 2.1 | 4.2 | 93.2 |
| 25 | A | 62.8 | 27.7 | 3.1 | 6.3 | 65 | A | 65.4 | 5.2 | 10.5 | 18.8 |
| 26 | A | 78.5 | 2.1 | 11.5 | 7.3 | 66 | D | 4.7 | 5.2 | 15.2 | 74.9 |
| 27 | B | 16.8 | 56.0 | 18.3 | 8.9 | 67 | A | 69.6 | 13.6 | 5.2 | 11.5 |
| 28 | QUESTION DELETED | | | | | 68 | B | 1.6 | 72.3 | 4.7 | 21.5 |
| 29 | C | 15.2 | 9.4 | 73.3 | 2.1 | 69 | D | 3.1 | 5.2 | 5.8 | 85.9 |
| 30 | D | 24.6 | 5.2 | 13.6 | 56.5 | 70 | B | 1.6 | 59.7 | 2.1 | 36.6 |
| 31 | D | 16.2 | 12.0 | 26.2 | 45.5 | 71 | C | 36.6 | 17.3 | 34.0 | 12.0 |
| 32 | B | 0.5 | 86.9 | 9.4 | 3.1 | 72 | QUESTION DELETED | | | | |
| 33 | C | 6.8 | 13.6 | 57.6 | 22.0 | 73 | D | 14.1 | 5.8 | 1.6 | 78.5 |
| 34 | A | 89.0 | 5.2 | 0.0 | 5.2 | 74 | C | 3.7 | 20.4 | 37.2 | 38.7 |
| 35 | D | 12.0 | 10.5 | 3.7 | 73.8 | 75 | QUESTION DELETED | | | | |
| 36 | D | 15.7 | 4.7 | 25.1 | 54.5 | 76 | B | 29.8 | 49.2 | 4.7 | 15.7 |
| 37 | C | 2.1 | 7.9 | 82.2 | 7.9 | 77 | QUESTION DELETED | | | | |
| 38 | D | 5.8 | 1.6 | 9.9 | 82.7 | 78 | D | 5.8 | 8.4 | 17.8 | 67.0 |
| 39 | C | 14.1 | 4.2 | 77.5 | 3.7 | 79 | A | 53.9 | 11.5 | 19.4 | 14.1 |
| 40 | B | 16.2 | 47.6 | 19.9 | 16.2 | 80 | A | 62.3 | 3.1 | 26.2 | 7.3 |

*The sum of the percentages for each question may be less than 100% because the No Response category is not included. This category is not greater than 1.0% for any question.

## SECTION 11: SUMMARY OF RESULTS

**In Table 65, the provincial distribution of student marks in the diploma examination courses is summarized. The percentage distribution for the school awarded mark, the June 1987 diploma examination mark, and the final blended mark achieved by students is shown for each of the A, B, C, and F grade categories. In addition, a comparison with the June 1986 diploma examination course results is provided.**

Table 65

Distribution of Student Marks in Diploma Examination Courses
June 1987 Examination Administration and June 1986 Final Course Mark[1]

| Diploma Examination Course | June 1987 School Awarded Mark | June 1987 Diploma Examination Mark | June 1987 Final Blended Mark | June 1986 Final Mark |
|---|---|---|---|---|
| English 30 | | | N = 13 286 | N = 13 122 |
| A (80-100%) | 13.6 | 11.5 | 10.8 | 8.7 |
| B (65-79%) | 39.5 | 34.8 | 38.4 | 39.1 |
| C (50-64%) | 38.7 | 40.8 | 45.0 | 46.9 |
| F (0-49%) | 8.2 | 13.0 | 5.8 | 5.4 |
| Mean | 65.0 | 63.6 | 64.8 | 64.3 |
| Standard Deviation | 12.1 | 12.6 | 11.2 | 10.7 |
| English 33 | | | N = 5 572 | N = 5 542 |
| A (80-100%) | 4.3 | 6.5 | 3.3 | 3.9 |
| B (65-79%) | 29.9 | 37.8 | 34.3 | 37.5 |
| C (50-64%) | 53.1 | 41.9 | 55.7 | 51.5 |
| F (0-49%) | 12.8 | 13.8 | 6.7 | 7.0 |
| Mean | 59.9 | 62.4 | 61.7 | 62.5 |
| Standard Deviation | 10.9 | 11.5 | 9.6 | 9.9 |

[1]The figures may be changed slightly as a result of appeals of school-awarded marks, rereads of diploma examinations, or special cases considerations.

(Continued)

Table 65 (continued)

| Diploma Examination Course | June 1987 School Awarded Mark | June 1987 Diploma Examination Mark | June 1987 Final Blended Mark | June 1986 Final Mark |
|---|---|---|---|---|
| Social Studies 30 | | | N = 11 696 | N = 11 148 |
| A (80-100%) | 17.5 | 14.5 | 14.6 | 15.2 |
| B (65-79%) | 36.4 | 33.3 | 35.9 | 40.8 |
| C (50-64%) | 38.6 | 33.0 | 40.6 | 37.3 |
| F (0-49%) | 7.4 | 19.2 | 8.8 | 6.8 |
| Mean | 66.0 | 63.2 | 64.9 | 66.2 |
| Standard Deviation | 12.4 | 14.7 | 12.7 | 12.3 |
| Mathematics 30 | | | N = 9 681 | N = 9 386 |
| A (80-100%) | 19.1 | 23.7 | 20.5 | 17.1 |
| B (65-79%) | 29.3 | 27.5 | 28.5 | 28.4 |
| C (50-64%) | 38.8 | 26.1 | 37.6 | 38.7 |
| F (0-49%) | 12.8 | 22.7 | 13.4 | 15.8 |
| Mean | 64.7 | 64.4 | 65.0 | 63.4 |
| Standard Deviation | 14.7 | 17.9 | 15.5 | 15.4 |
| Biology 30 | | | N = 10 284 | N = 9 736 |
| A (80-100%) | 20.3 | 26.0 | 23.1 | 19.9 |
| B (65-79%) | 35.2 | 25.9 | 30.3 | 32.3 |
| C (50-64%) | 36.0 | 24.0 | 33.3 | 37.2 |
| F (0-49%) | 8.4 | 24.1 | 13.2 | 10.6 |
| Mean | 66.7 | 64.6 | 66.1 | 65.8 |
| Standard Deviation | 13.1 | 18.8 | 15.3 | 14.1 |
| Chemistry 30 | | | N = 8 932 | N = 8 518 |
| A (80-100%) | 23.6 | 27.8 | 24.8 | 20.8 |
| B (65-79%) | 36.3 | 29.0 | 34.7 | 31.0 |
| C (50-64%) | 32.1 | 25.7 | 30.2 | 34.5 |
| F (0-49%) | 8.0 | 17.4 | 10.3 | 13.7 |
| Mean | 68.0 | 66.9 | 67.9 | 65.4 |
| Standard Deviation | 13.7 | 17.6 | 14.9 | 15.2 |

Table 65 (continued)

| Diploma Examination Course | School Awarded Mark | Diploma Examination Mark | Final Blended Mark | June 1986 Final Mark |
|---|---|---|---|---|
| | | June 1987 | | |
| Physics 30 | | | N = 5 183 | N = 5 141 |
| A (80-100%) | 26.2 | 22.9 | 22.8 | 22.7 |
| B (65-79%) | 38.4 | 25.5 | 33.3 | 34.8 |
| C (50-64%) | 29.0 | 29.2 | 33.5 | 32.5 |
| F (0-49%) | 6.3 | 22.4 | 10.4 | 10.0 |
| Mean | 69.4 | 63.9 | 67.1 | 67.2 |
| Standard Deviation | 13.2 | 17.9 | 14.7 | 14.3 |
| Langue et Littérature 30 | | | N = 191 | N = N/A |
| A (80-100%) | 34.0 | 31.9 | 29.3 | N/A |
| B (65-79%) | 45.5 | 49.2 | 52.4 | N/A |
| C (50-64%) | 18.3 | 17.8 | 17.8 | N/A |
| F (0-49%) | 2.1 | 1.0 | 0.5 | N/A |
| Mean | 73.0 | 74.1 | 73.8 | N/A |
| Standard Deviation | 10.9 | 9.9 | 9.3 | N/A |

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